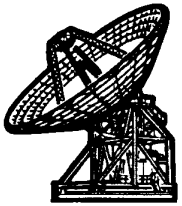
Resource Contention

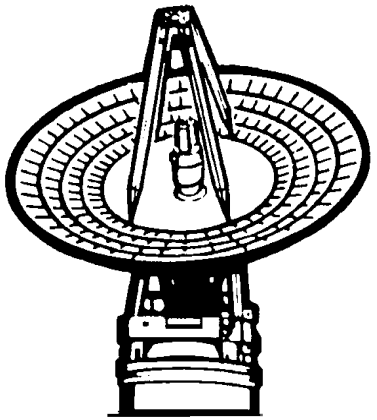
Version 2.0

2005 - 2014

Napoleon Lacey

February 10, 2004





Agenda

- Loading Study
- Periods of Contention
- Events, Recommendations and Analyses

Loading Study

- Project Changes
- New and Deleted Projects
- Changes in DSN Resource Support Request
- DSN User / Mission Planning Set
  - Ongoing / Approved Projects
  - Advanced / Planning Projects
- Major DSN Downtimes by Date
- IND Resource Implementation Planning Matrix

Loading Study

Project Changes Since August 2003 RARB

- **Advanced Tracking and Observational Techniques (ATOT)**
  - Name changed from Mission Enhancement by Ground-based Astronomy (MEGA)
- **Cluster**
  - End of extended mission date changed from 09/30/07 to 02/28/06
- **Dawn**
  - Launch date changed from 05/27/06 to 06/17/06
  - Mission has been moved from the Advanced Planning Mission Set to the Ongoing/Approved Mission Set
- **Geotail**
  - End of extended mission date changed from 09/30/07 to 12/31/08
- **INTEGRAL**
  - End of extended mission date changed from 12/18/07 to 12/31/08
- **Lunar-A**
  - Launch date changed from 08/14/04 to 08/30/04

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Project Changes Since August 2003 RARB

- **MESSENGER**
  - Launch date changed from 03/10/04 to 05/11/04
- **Mars Express**
  - End of extended mission date changed from 08/03/08 to 01/06/08
- **New Horizons**
  - Mission has been moved from the Advanced Planning Mission Set to the Ongoing/Approved Mission Set
  - End of prime mission date changed from 03/18/17 to 04/17/16
- **Phoenix Scout**
  - End of prime mission date changed from 11/05/08 to 11/04/08
- **Polar**
  - End of extended mission date changed from 09/30/07 to 09/30/05

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Project Changes Since August 2003 RARB

- **Spitzer Space Telescope**
  - Name changed from Space Infrared Telescope Facility (SIRTF)
  - End of prime mission date changed from 10/12/08 to 02/25/06
  - End of extended mission date of 08/23/08 added
- **SOHO**
  - End of extended mission changed from 09/30/07 to 12/31/08
- **ST5**
  - Launch date changed from 11/19/04 to 06/27/05
- **STEREO Ahead**
  - Launch date changed from 11/15/05 to 02/11/06
- **STEREO Behind**
  - Launch date changed from 11/15/05 to 02/11/06
- **Ulysses**
  - End of extended mission date changed from 12/31/06 to 03/31/08

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Project Changes Since August 2003 RARB

- **Wind**
  - End of extended mission date changed from 09/30/07 to 12/31/08
- **WMAP**
  - End of extended mission date changed from 10/01/06 to 10/01/07

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New Projects Since August 2003 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
SELENE	SELE	07/23/05	09/30/06	TBD
Venus Express	VEX	10/26/05	08/19/07	TBD

The above missions are not yet approved by NASA Headquarters.

The requirements for the above missions were not considered during the preparation of the RARB analysis and recommendations.

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Deleted Projects Since August 2003 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
Galileo	GLLO	10/18/89	12/07/97	09/21/03
Nozomi	NOZO	07/03/98	12/15/03	TBD
RadioAstron	RADA	03/15/05	06/15/10	TBD
Advanced Radio Interferometry between Space and Earth (ARISE)	ARSE	06/15/10	06/15/15	- - -
VLBI Space Observatory Programme (VSOP-2)	VSP2	06/15/10	06/15/15	- - -

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Changes in DSN Resource Support since August 2003 RARB

- **Goldstone Solar System Radar**
  - Added Asteroid supports in 2005: 1999RR28 in April (4); 1999RQ36 in September (6); 1998RO1 in September/October (3); 1862 Apollo in November (7)
  - Added Asteroid supports in 2006: 2000PN9 in March (6); 2001CB21 in September/October (6)
  - Added Asteroid supports in 2007: 1991VK in January (6); 2340 Hathor in October (4); 3200 Phaethon in December (5)

  Note: (X) = Number of Supports

- **Mars Express**
  - Reworked Occultation and Orbital Science coverage and moved the support from 34BWG1 to DSS-14, 65
  - Increased Bi-Static Radar Support from 1 pass to 2 passes per week at 70M

- **MESSENGER**
  - Moved Venus Flyby support from March, 2006 to August/September, 2005
  - Added Delta DOR supports in 2006 and 2007
  - Moved Deep Space Maneuver from September to December in 2007
  - Moved Mercury Flyby 2 from March/April to June/July in 2007

Loading Study

Changes in DSN Resource Support since August 2003 RARB

- **SOHO**
  - Added 70M support for Keyhole Events in 2005: March (32); June (24); September (32); December (22).
  - Added 70M support for Keyhole Events in 2006: March (34); June (24); late August to early September (30); late November to early December (22).
  - Project will submit updated and extended keyhole information for 2007.

  Note: (XX) = Number of passes

- **Space Geodesy**
  - Project changed previous RARB support agreements for 8-hour support to 24 hours during 2005 and 2006. The reinstated 24-hour supports will not be considered during the RARB. These supports will be scheduled on a best efforts basis during the Mid-Range schedule generation and negotiation.

Loading Study

DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
DSN Antenna Calibration	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
European VLBI Network	EVN	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Reference Frame Calibration	DSN	--	--	--
Space Geodesy	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	09/30/07
Voyager 1	VGR1	09/05/77	12/31/80	09/30/07
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Ulysses	ULYS	10/06/90	09/11/95	03/31/08
Geotail	GTL	07/24/92	07/24/95	12/31/08
Wind	WIND	11/01/94	11/01/97	12/31/08
SOHO	SOHO	12/02/95	05/02/98	12/31/08
Polar	POLR	02/22/96	08/23/97	09/30/05
Gravity Probe B (non spacecraft support)	GPB	06/01/96	05/30/05	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	01/03/08
Advance Composition Explorer	ACE	08/25/97	02/01/01	09/30/07

– Ongoing / Approved Projects (continued) –

Project	Acronym	Launch or Start	EOPM	EOEM
Cassini	CAS	10/15/97	06/30/08	06/30/10
Nozomi (Planet-B)	NOZO	07/03/98	12/15/03	- - -
Stardust	SDU	02/07/99	01/14/06	- - -
Chandra X-ray Observatory	CHDR	07/23/99	07/24/09	07/24/14
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	05/30/02	09/30/07
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	02/28/06
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	02/28/06
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	02/28/06
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	02/28/06
2001 Mars Odyssey	M01O	04/07/01	08/24/04	05/29/08
Wilkinson Microwave Anisotropy Probe	WMAP	06/30/01	10/01/03	10/01/07
Genesis	GNS	08/08/01	09/08/04	- - -
Advanced Tracking and Observational Techniques (ATOT)	MEGA	02/01/02	12/31/08	- - -
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/31/08
Hayabusa (MUSES - C)	MUSC	05/09/03	06/05/07	- - -
Mars Express Orbiter	MEX	06/02/03	02/11/06	08/03/08
Spirit (Mars Exploration Rover - A)	MER2	06/10/03	04/06/04	05/11/04

Loading Study

DSN User / Mission Planning Set

– Ongoing / Approved Projects (continued) –

Project	Acronym	Launch or Start	EOPM	EOEM
Opportunity (Mars Exploration Rover - B)	MER1	07/07/03	04/27/04	06/15/04
Spitzer Space Telescope (SIRTF)	STF	08/25/03	02/25/06	08/23/08
Rosetta	ROSE	02/26/04	12/31/15	- - -
MESSENGER	MSGR	05/11/04	04/06/10	- - -
Lunar - A	LUNA	08/30/04	04/11/05	- - -
Deep Impact Flyby	DIF	12/30/04	08/05/05	- - -
Space Technology 5	ST5	06/27/05	10/09/05	TBD
Mars Reconnaissance Orbiter	MRO	08/10/05	12/31/10	12/31/15
New Horizons	NHPC	01/10/06	04/17/16	TBD
STEREO Ahead	STA	02/11/06	05/15/08	- - -
STEREO Behind	STB	02/11/06	05/15/08	- - -
Dawn	DAWN	06/17/06	07/26/15	TBD

Loading Study

DSN User / Mission Planning Set

– Advanced / Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
SELENE	SELE	07/23/05	09/30/06	TBD
Venus Express	VEX	10/26/05	08/19/07	TBD
Phoenix Scout	PHX	08/09/07	11/04/08	TBD
Kepler	KPLR	10/01/07	09/26/11	TBD
Mars Telecommunications Orbiter 2009	M09T	09/07/09	09/07/16	09/07/20
Mars Science Laboratory 2009	M09L	10/25/09	03/04/12	TBD
Space Interferometry Mission	SIM	12/31/09	06/30/20	TBD
James Webb Space Telescope	JWST	08/01/11	07/31/16	TBD
Mars Placeholder 2011	M11S	10/30/11	09/10/14	TBD
Mars Placeholder 2013	M13O	11/28/13	08/21/16	TBD

Loading Study

DSN Major Downtimes by Date

– 2004 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 15	Antenna Controller Replacement	04/12/2004	06/13/2004	63	16 - 24	103	165
DSS 43	Antenna Rebalance	05/29/2004	06/06/2004	9	22 - 23	150	158
DSS 14	Antenna Controller Replacement	07/07/2004	12/07/2004	154	28 - 50	189	342
DSS 14	Hydrostatic Bearing	07/07/2004	12/07/2004	154	28 - 50	189	342
DSS 45	Life Extension	08/09/2004	12/05/2004	119	33 - 49	222	340
DSS 14	NIB - USC Installation	09/20/2004	10/03/2004	14	39 - 40	264	277
DSS 45	NIB - USC Installation	11/22/2004	12/05/2004	14	48 - 49	327	340

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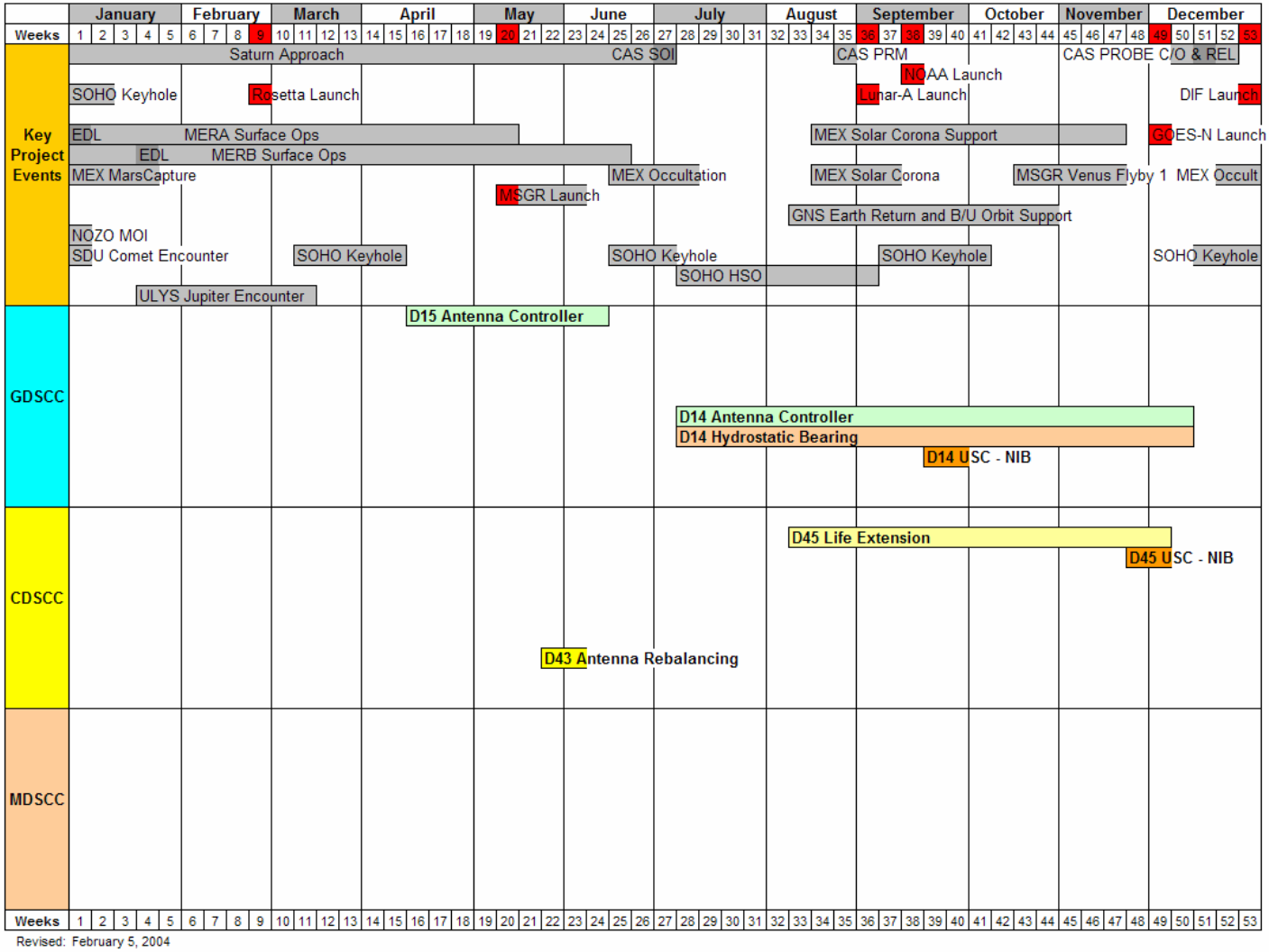
DSN Major Downtimes by Date

– 2004 –



Revised: February 5, 2004

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DSN Major Downtimes by Date

– 2005 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 27	NSP Implementation	01/03/2005	01/30/2005	28	01 - 04	003	030
DSS 27	NIB - USC Installation	01/10/2005	01/23/2005	14	02 - 03	010	023
DSS 63	USC Installation	01/17/2005	01/30/2005	14	03 - 04	017	030
DSS 26	USC Installation	01/24/2005	02/06/2005	14	04 - 05	024	037
DSS 65	Antenna Controller Replacement	01/31/2005	05/29/2005	119	05 - 21	031	149
DSS 65	Antenna Controller Replacement - Proposed	01/31/2005	07/03/2005	154	05 - 26	031	184
DSS 65	NIB - USC Installation	01/31/2005	02/06/2005	7	05 - 05	031	037
DSS 65	Relocation	01/31/2005	05/29/2005	119	05 - 21	031	149
DSS 65	Life Extension	01/31/2005	05/29/2005	119	05 - 21	031	149
DSS 34	X/X-Ka Band - Proposed	02/15/2005	04/10/2005	56	07 - 14	45	100
DSS 34	NIB - USC Installation - Proposed	02/15/2005	03/06/2005	14	07 - 09	45	65
DSS 25	USC Installation	02/21/2005	03/06/2005	14	08 - 09	052	065
DSS 15	USC Installation	04/11/2005	04/24/2005	14	15 - 16	101	114
DSS 54	USC Installation	04/11/2005	04/17/2005	7	15 - 15	101	107
DSS 55	USC Installation	04/25/2005	05/01/2005	7	17 - 17	115	121
DSS 15	USC Installation - Proposed	04/25/2005	05/08/2005	14	17 - 18	115	128

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DSN Major Downtimes by Date

– 2005 (continued) –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 34	X/X-Ka Band	05/02/2005	06/26/2005	56	18 - 25	122	177
DSS 34	NIB - USC Installation	06/13/2005	06/26/2005	14	24 - 25	164	177
DSS 25	USC Installation - Proposed	05/30/2005	06/12/2005	14	22 - 23	150	163
DSS 24	USC Installation	06/27/2005	07/03/2005	7	26 - 26	178	184
DSS 55	USC Installation - Proposed	07/04/2005	07/10/2005	7	27 - 27	185	191
DSS 54	USC Installation - Proposed	07/11/2005	07/17/2005	7	28 - 28	192	198
DSS 43	Antenna Controller Replacement	07/18/2005	01/01/2006	168	29 - 52	199	001
DSS 43	NIB - USC Installation	07/18/2005	07/31/2005	14	29 - 30	199	212
DSS 43	Hydrostatic Bearing	07/18/2005	01/01/2006	168	29 - 52	199	001

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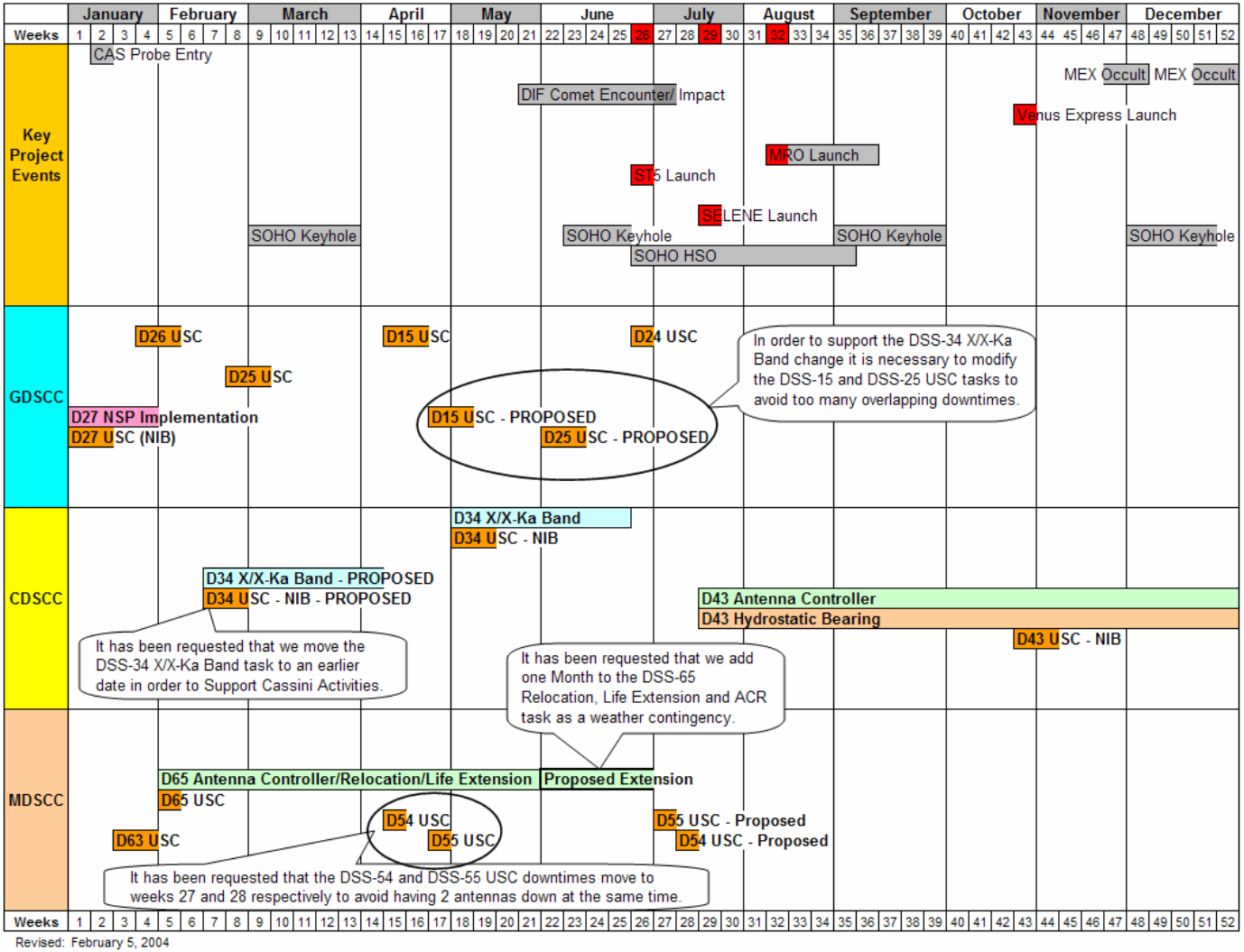
DSN Major Downtimes by Date

– 2005 –



Revised: February 5, 2004

Loading Study

DSN Major Downtimes by Date

– 2006 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 63	Antenna Controller Replacement	05/22/2006	09/03/2006	105	21 - 35	142	246
DSS 24	X/X-Ka Band	09/04/2006	10/22/2006	49	36 - 42	247	295
DSS 45	Antenna Controller Replacement - Proposed	10/16/2006	12/17/2006	63	41 - 49	282	344
DSS 45	Antenna Controller Replacement	10/30/2006	12/31/2006	63	44 - 52	303	365

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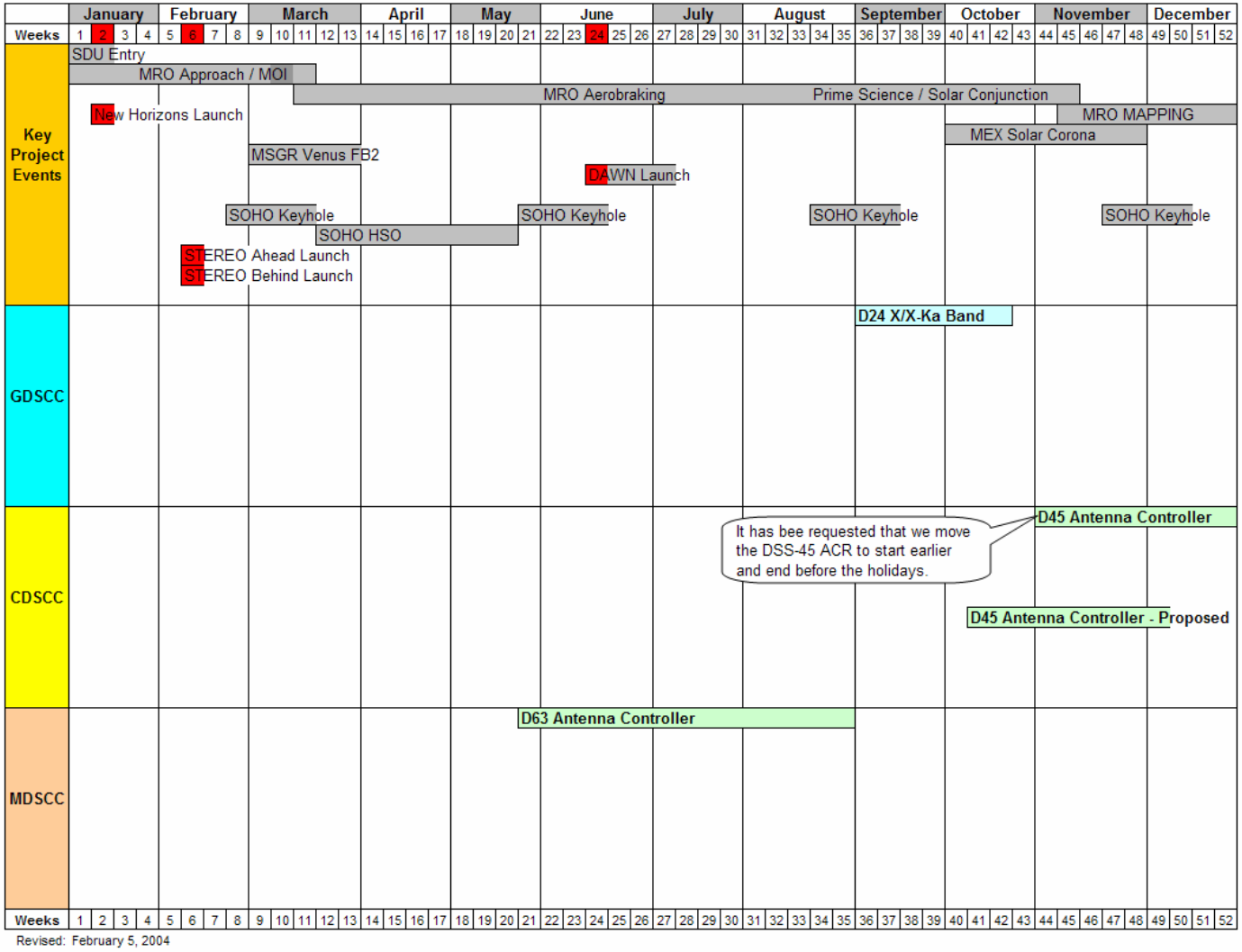
DSN Major Downtimes by Date

– 2006 –



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DSN Major Downtimes by Date

– 2007 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 54	X/X-Ka Band - Proposed	06/04/2007	07/29/2007	55	23 - 30	155	210

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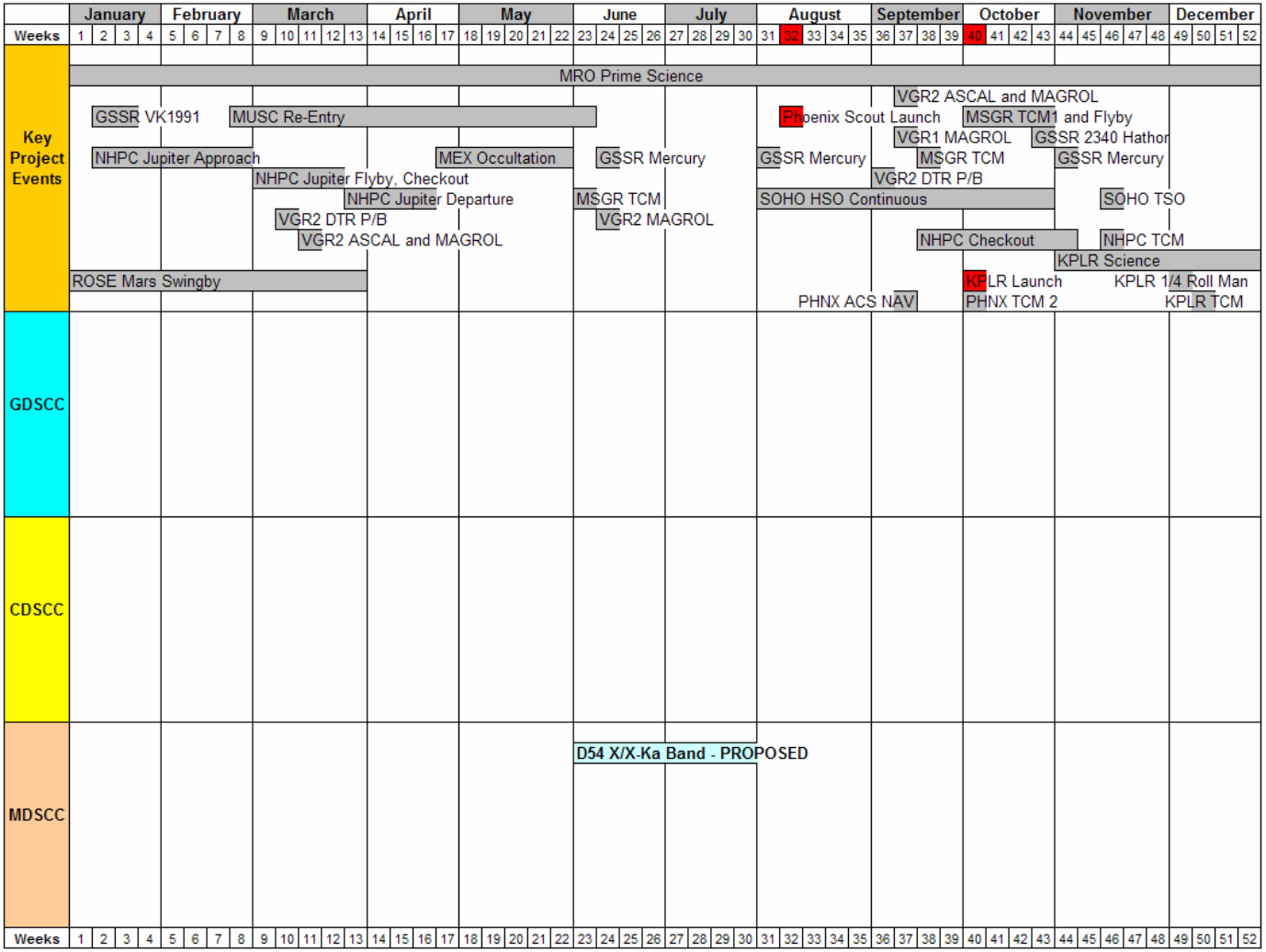
DSN Major Downtimes by Date

– 2007 –



Resource Allocation Review Board

Loading Study

IND Resource Implementation Planning Matrix

Station	Subnet	Delivery Date	S-Band Down	S-Band Up	X-Band Down	X-Band Up	20 kW X-Band	Ka-Band Down	Ka-Band Up	NSP
DSS-14	70M	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-15	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-16	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-24	34BWG1	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	10/23/06	N/A	XXXX
DSS-25	34BWG2	XXXX	N/A	N/A	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
DSS-26	34BWG2	XXXX	N/A	N/A	XXXX	XXXX	XXXX	XXXX	N/A	XXXX
DSS-27	34HSB	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	01/31/05
DSS-34	34BWG1	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	04/10/05	N/A	XXXX
DSS-43	70M	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-45	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-46	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-54	34BWG1	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	08/01/07	N/A	XXXX
DSS-55	34BWG2	XXXX	N/A	N/A	XXXX	XXXX	XXXX	XXXX	N/A	XXXX
DSS-63	70M	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-65	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-66	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A

XXXX = Capability Currently Exists XXXX = Capability Recently Exists
N/A = Capability Not Planned XX/XX/XX = Change Since Last RARB

01/07/04

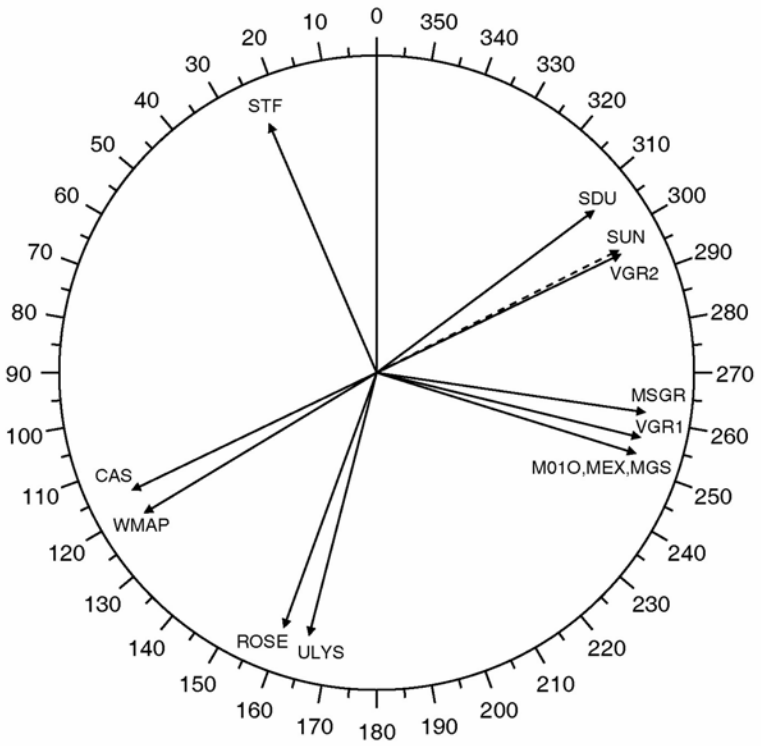
Periods of Contention

Month	Weeks		
	2005	2006	2007
January	01 – 04	01 – 04	01 – 04
February	05 – 08	05 – 08	05 – 08
March	09 – 13	09 – 13	09 – 13
April	14 – 17	14 – 17	14 – 17
May	18 – 21	18 – 21	18 – 22
June	22 – 26	22 – 26	23 – 26
July	27 – 30	27 – 30	27 – 30
August	31 – 34	31 – 35	31 – 35
September	35 – 39	36 – 39	36 – 39
October	40 – 43	40 – 43	40 – 43
November	44 – 47	44 – 48	44 – 48
December	48 – 52	49 – 52	49 – 52

Spacecraft Right Ascension

January 15, 2005

SPACECRAFT RIGHT ASCENSION
JANUARY 15, 2005



THE SPACECRAFT RIGHT ASCENSION FIGURES SHOW THE POSITIONS OF THE SPACECRAFT IN THE SKY RELATIVE TO EACH OTHER ON THE 15TH OF EACH MONTH FOR THE YEAR INDICATED. RIGHT ASCENSTION IS COMMONLY MEASURED IN HOURS, WITH 1 HOUR = 15 DEGREES.

THE ARROW INDICATES THE CENTER OF A SPACECRAFT VIEW FROM EARTH. EXTEND 60 DEGREES ON BOTH SIDES OF THE ARROW TO CALCULATE AN EIGHT (8) HOUR VIEW PERIOD.

Events, Recommendations and Analyses

- **The RARB Redbook makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.**
  - **Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is an estimate of the amount of requested time, typically in percentage of requirements or modified requirements, that is unsupportable, based on resource availability, other users' requirements, assumed priorities, and view periods. The following percentages apply:**

Low/Workable	= <15%
Moderate	= 15% to 30%
Severe	= 31% to 45%
Extreme	= >45%

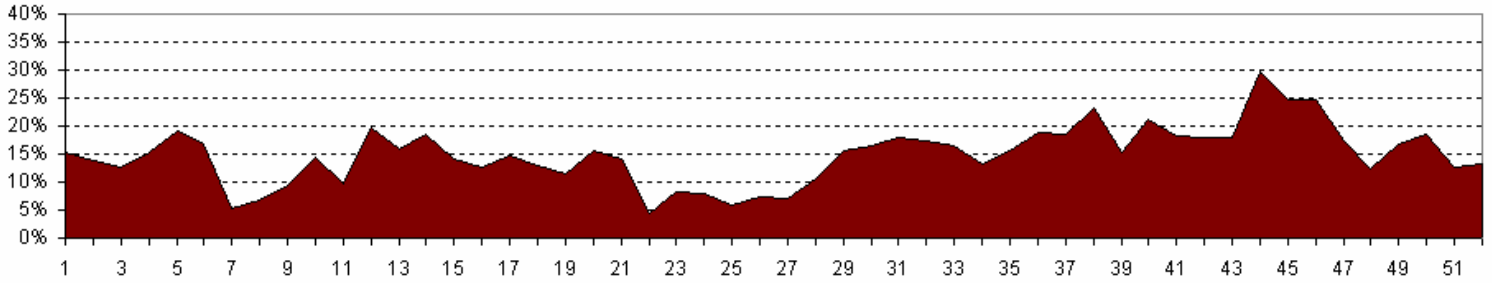
Workable is a term used to express a condition wherein the projected unsupportable time is low. This condition occurs when the general forecasting analysis indicates a low percentage of unsupportable time or when RARB agreements have been made to reduce contention to a workable level. Workable essentially means that experience has shown that the remaining contention may be solved during final schedule preparations and negotiations.

2005 Events, Analysis and Recommendations

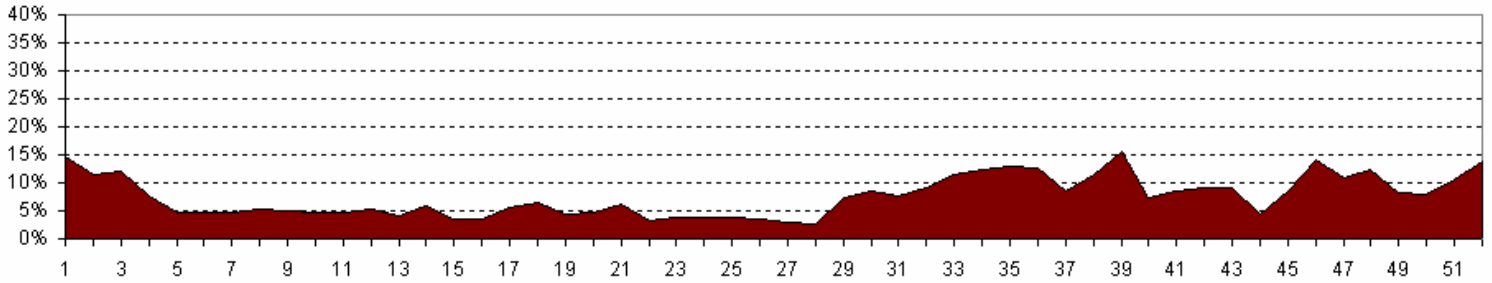
Events, Recommendations and Analyses

2005 Weekly Average User Unsupportable Time

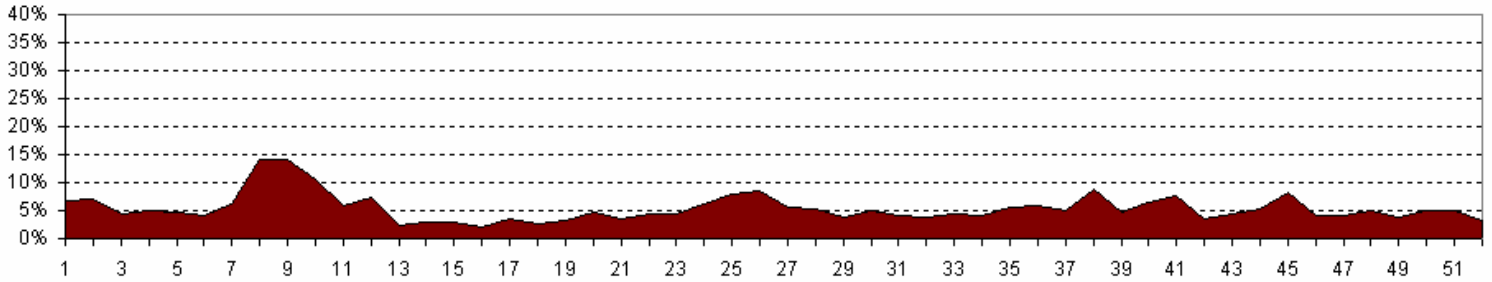
70M



34HEF



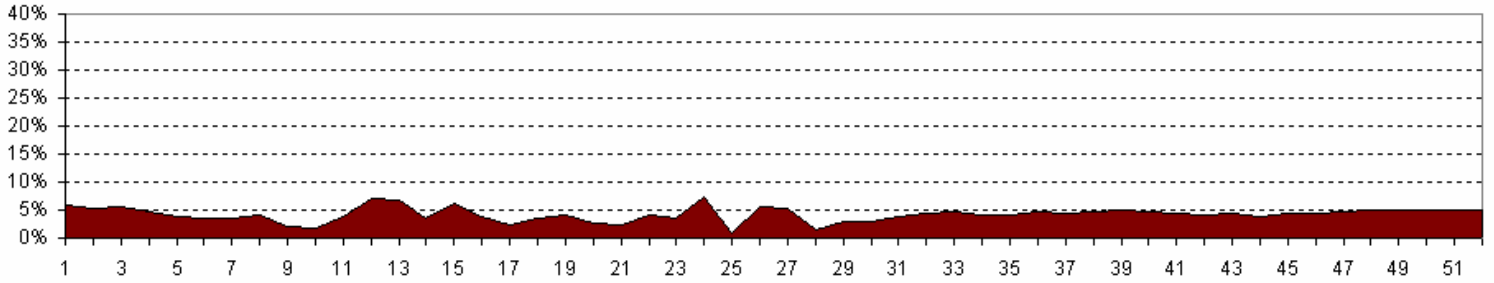
34BWG1



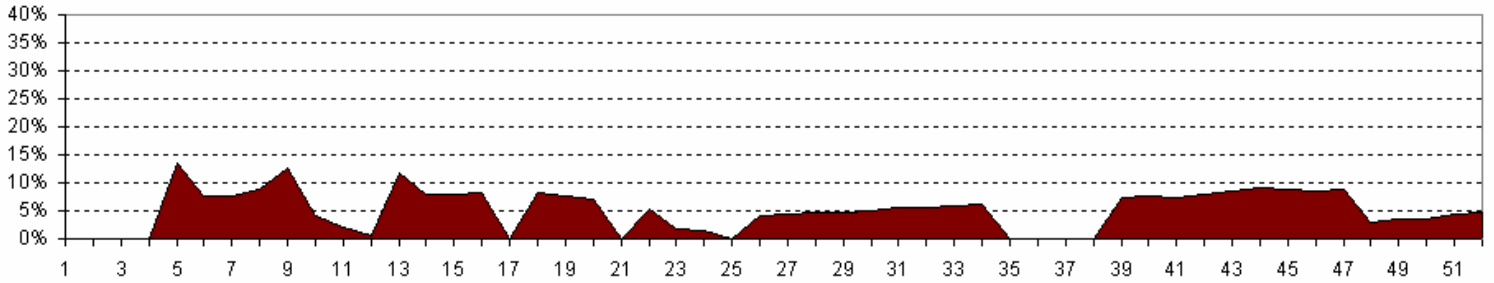
Events, Recommendations and Analyses

2005 Weekly Average User Unsupportable Time

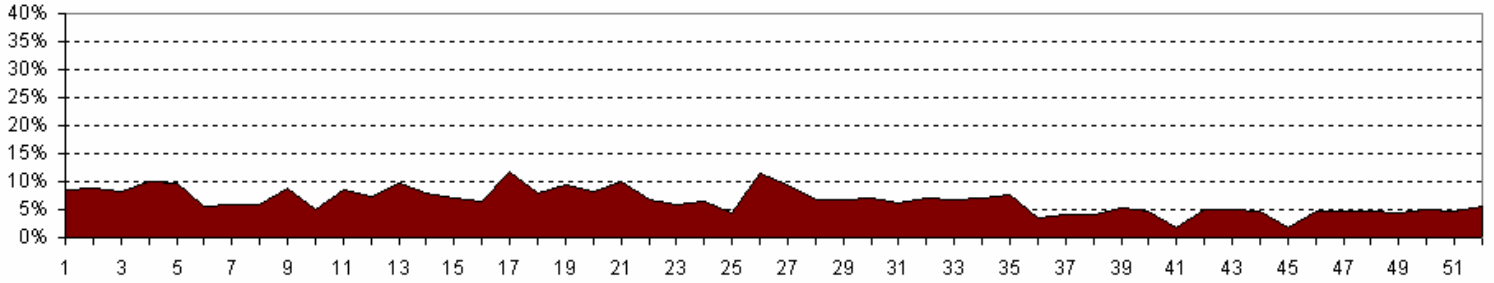
34BWG2



34HSB



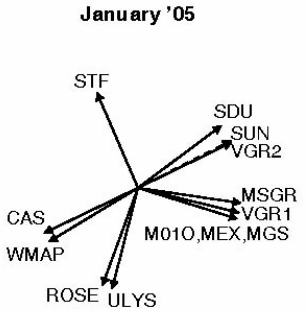
26M



Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04)



EVENTS

DSS-26 approved downtime (microwave subsystem controller) beginning in week 04

DSS-27 approved downtime (microwave subsystem controller) in weeks 02 and 03

DSS-63 approved downtime (microwave subsystem controller) in weeks 03 and 04

Cassini probe entry in weeks 01 and 02 and Saturn tour

Deep Impact Flyby LEOP

Goldstone Solar System Radar Mercury support in week 01

Gravity Probe-B quarterly epoch in week 04

Hayabusa TCM-2 in weeks 02 – 04

Mars Express orbital science and occultation

Wind TCM in week 02, DOY 016

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

☺ DSS reduce DSS-15 maintenance from 8 hours to 6 hours in weeks 01 and 02. (2)

GBRA reduce M-Wave Spectroscopy and Planetary Radio Astronomy from 9 hours to 6 hours, delete support for New Proposals in all weeks, and move DSS-43 Host Country from week 03 to one 8-hour support in week 07 and two 8-hour supports in week 08. (1)

GSSR reduce GODR supports from 8 hours to 4 hours in weeks 01 and 03, move week 03 support to week 04, and reduce Mercury Radar support from 5.2 hours to 4 hours in week 01. (1)

☺ M01O move 3 of 6 standalone passes from the 70M to DSS-43 and MSPA with MGS in weeks 01 and 02. Move the remaining standalone 70M passes in weeks 01 and 02 to DSS-14,63 and MSPA with MEX. Move the 2 standalone passes in weeks 03 and 04 to DSS-43 and MSPA with MGS and delete the 4-hour standalone passes at DSS-43. Maximize MSPA capability, MSPA 2 - 3 passes per week with MGS at DSS-25, 34, 55 and 2 passes per week with MEX at DSS-14,65 to meet tracking requirements. (1, 2)

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS (Continued)

☺ MEX reduce 3 of 7 DSS-14,65 passes from 10.8 hours to 10 hours and move to DSS-14,63 to MSPA with M01O in weeks 01 and 02. Reduce remaining 4 passes in weeks 01 and 02 at DSS-14,65 from 10.8 hours to 6 hours and move 2 passes per week to DSS-14 only. Reduce 3 of 7 DSS-14,65 passes from 10.8 hours to 6 hours in weeks 03 and 04 and move 2 of the 3 passes in week 03 to DSS-14 only. Maximize MSPA capability, MSPA 2 passes per week with M01O at DSS-14,65 to meet M01O tracking requirements. (1, 2)

☺ MGS move the three 70M standalone passes to DSS-43, decrease pass duration from 14 hours to 10 hours, and MSPA with M01O in weeks 01 and 02. Move 3 passes in week 03 and 2 passes in week 04 from DSS-24,34,65 to DSS-43 and MSPA with M01O. Move 1 of 3 passes in week 04 from DSS-25,34,65 to DSS-43, reduce pass duration from 14 hours to 10 hours, and MSPA with M01O. Move remaining standalone passes, 2 in weeks 01 and 02, 3 in week 03, and 2 in week 04 from DSS-25,34,65 to DSS-25,34,55 and MSPA with M1O to meet tracking requirements. Add an additional three 4-hour passes in weeks 01 and 02 and one 4-hour pass in week 04 to maintain MGS contiguous 14-hour support requirement. (1, 2)

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04) (continued)

ANALYSES

1. (70M) The projected unsupportable time for DSS routine maintenance is moderate in weeks 01 and 04 and severe for bearing maintenance. The unsupportable time for GSSR, M01O mapping, MEX orbital science, and MGS mapping and beta supplement is moderate in all weeks. The unsupportable time for this period is due to oversubscription in the daylight maintenance and Mars project's view periods and in weeks 03 and 04, it is further impacted by the approved downtime for DSS-63 microwave subsystem controller.

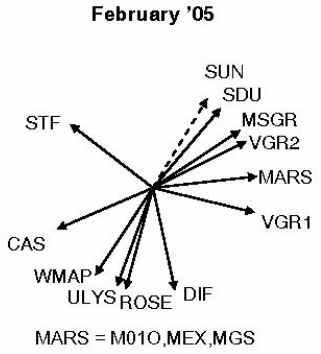
2. (34HEF) The unsupportable time is moderate for DSS maintenance, MEX orbital science, and VGR2 in weeks 01 – 03 and severe for MGS mapping and beta supplement. Contention is due to Mars view period overlap with the daylight maintenance and VGR2 view period, the 14-hour MGS mapping and beta supplement requirement, Deep Impact Flyby launch and launch support and Cassini probe entry support. Unsupportable time is further impacted by the approved downtime for DSS-63 in weeks 03 and 04 and for DSS-26 in week 04.

Contention levels on the 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08)



EVENTS

DSS-26 approved downtime (microwave subsystem controller) ending in week 05

DSS-34 proposed downtime (X/X-Ka band) beginning in week 07

DSS-65 approved downtime (antenna controller replacement, life extension and relocation) beginning in week 05

Cassini tour

Deep Impact Flyby inflight demo on DOY 055 and TCM in week 08

European VLBI Network E500 quarterly epoch in week 07

Ground Based Radio Astrometry RA500 SOC-M4 quarterly epoch in week 06

Lunar-A LOI beginning in week 05, DOY 032

Rosetta Earth swingby support beginning in week 07, DOY 048

Voyager 1 MAGROL in week 05, DOY 035

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

☺ DSS-34 approve downtime for X/X-Ka Band installation.

☺ Chandra move 14 of 21 in weeks 07 and 08 from the 34BWG1 subnet to DSS-24,54, move the remaining 7 passes on the 34BWG1 to the 26M subnet and increase pass duration from 1 hour to 2 hours. (2)

☺ Cluster delete request for DSS-34 in weeks 07 and 08 for SSO supports and use DSS-46/45/43. (2)

☺ Deep Impact Flyby move weeks 07 and 08 cruise supports from DSS-15,34,54 to DSS-15,45,54 and move TCM support in week 08 from DSS-26,34,54 to DSS-26,45,54. (2)

GBRA reduce M-Wave Spectroscopy, New Proposals, and Planetary Radio Astronomy from 9 hours to 4.5 hours. Change RA500 SOC-M4 event from 24 hours to three 8-hour supports and move supports from week 06 to week 08 and delete VLBA SOC-M4 in week 05. (1)

☺ GSSR reduce GODR support from 8 hours to 4 hours and move week 05 support to week 07. (1)

☺ IMAG move routine and science load supports in weeks 07 and 08 from the 34BWG1 to DSS-24,45/46,54. (2)

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS (Continued)

☺ M01O move 2 - 3 MSPA passes with MGS from the 70M to DSS-43 in weeks 05 and 06. Move two of five 70M standalone passes in weeks 05 and 07, and 1 of 4 passes in week 06 to DSS-43. Move 3 remaining standalone passes from the 70M to DSS-14,63 and MSPA with MEX in weeks 05 and 06. MSPA 5 of 7 standalone 70M passes with MGS and move the remaining 2 of 7 passes to DSS-43 in week 08. (1)

☺ MEX MSPA 3 of 7 DSS-14,63 orbital science and occultation passes with M01O and reduce the remaining 2 passes per week from 10.5 hours to 6 hours in weeks 05 and 06. (1)

☺ MGS move 2 - 3 MSPA passes with M01O from the 70M to DSS-43 in weeks 05 and 06. Move 3 of 7 mapping and beta supplement passes from DSS-15,45,63 to DSS-43, reduce pass duration from 14 hours to 10 hours, and MSPA with M01O, to maintain MGS contiguous 14-hour support, add three 4-hour passes on the 34BWG2 in week 08. Move remaining 4 standalone 14-hour passes from DSS-15,45,63 to DSS-15,45,55. Move mapping and beta supplement passes in week 08 from the 34BWG1 to DSS-24,45,54. (1, 2)

☺ MSGR move routine support in weeks 07 and 08 from DSS-24,34,55 to DSS-24, 45,55. (2)

☺ ULYS move supports in weeks 07 and 08 from the 34BWG1 to DSS-24,54,45 and reduce support from 10 hours to 8 hours. (2)

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS (Continued)

☺ VGR2 move supports in weeks 07 and 08 from DSS-43,34 to DSS-43,45 and reduce pass duration from 8 hours to 6 hours. (2)

☺ WIND move all passes in weeks 07 and 08 from the 34BWG1 subnet to DSS-24,54. (2)

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for DSS routine and bearing maintenance, GBRA RA 500 SOC-M4 support, M01O mapping, MEX orbital science, and VGR1 MAGROL. The contention is due to the oversubscription in the Mars projects view periods and view period overlap with daylight maintenance compounded by 24-hour GBRA and RFC supports.

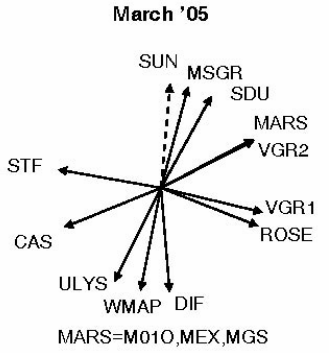
2. (34BWG1) CHDR, CLU2, DIF, DSN Ant Cal, IMAGE, MGS, Hayabusa (MUSES-C), SOHO keyhole event, ULYS, VGR 2 and WIND have contention with the proposed DSS-34 downtime for X/X-Ka Band Installation beginning in week 07.

Contention levels on the 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13)



EVENTS

DSS-34 proposed downtime (X/X-Ka band)

DSS-65 approved downtime (antenna controller replacement, life extension and relocation)

Cassini tour

Deep Impact Flyby TCM in weeks 09 – 12 and comet encounter rehearsal in week 12

Goldstone Solar System Radar Asteroid 1998WT in weeks 09 and 10, Mercury RSD GBT in weeks 12 and 13, Asteroid 1999RR28 in week 13, and Mercury observations with Arecibo in week 13

Hayabusa asteroid rendezvous in week 13

Lunar-A LOI ending in week 08, DOY 058

Rosetta Earth swingby week 09, DOY 061 and swingby support ending in week 11

SOHO keyhole maneuver in week 12 and keyhole event

Voyager 2 DTR P/B in week 10, DOY 068, ASCAL and MAGROL in week 11, DOY 073 and DOY 076

Wilkinson Microwave Anisotropy Probe maneuver in week 11

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

☺ DSS-34 approve downtime for X/X-Ka Band installation.

☺ Chandra move 14 of 21 from the 34BWG1 subnet to DSS-24,54, move the remaining 7 passes on the 34BWG1 to the 26M subnet and increase pass duration from 1 hour to 2 hours. (2)

☺ CLU2 delete request for DSS-34 for SSO supports and use DSS-46/45/43. (2)

☺ Deep Impact Flyby move cruise supports from DSS-15,34,54 to DSS-15,45,54 and move TCM support in weeks 09 - 12 from DSS-26,34,54 to DSS-26,45,54. (2)

☺ DSN Antenna Calibration delete DSS-34 support in week 10 and reschedule support in week 15. (2)

GBRA reduce M-Wave Spectroscopy support from 9 hours to 6 hours and use DSS-43 only in weeks 10 – 12. Reduce Planetary Radio Astronomy support from 9 hours to 6 hours in weeks 09, 11 – 13, and delete support in week 10. Delete Host Country at DSS-63 in week 10 and move VLBA support from week 10 to week 09. (1)

☺ GSSR reduce all GODR support from 8 hours to 4 hours and move 2 Asteroid 1999RR28 supports from week 13 to week 12. (1)

☺ Hayabusa (MUSES-C) move rendezvous passes in week 13 from DSS-25,34,55 to DSS-25,45,54. (2)

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS (Continued)

☺ IMAGE move routine and science load supports from the 34BWG1 to DSS-24,45/46,54. (2)

☺ M01O move 2 standalone mapping passes from the 70M to DSS-43, reduce pass duration from 10 hours to 8 hours in week 09 and 10 and MSPA 2 additional passes with MGS in weeks 09 and 10 at DSS-24,45,54. MSPA 5 of 7 mapping passes at the 70M with MEX orbital science in week 11. Move 5 of 7 passes from the 70M to DSS-14,63 and MSPA with MEX in weeks 12 and 13. Move remaining two 70M mapping passes to DSS-43, reduce pass duration from 10 hours to 8 hours in weeks 11 – 13 and MSPA 2 additional passes per week with MGS on the 34BWG2 subnet . (1, 2)

☺ MEX reduce 2 standalone passes at DSS-14,63 from 6 hours to 5 hours and use DSS-63 only in weeks 09 - 11. Move 5 passes at DSS-24,54 to the 70M, increase pass duration from 6 hours to 10 hours and MSPA with M01O in week 11. MSPA 5 of 7 orbital science/occultation passes at DSS-14,63 with M01O in weeks 12 and 13 and reduce remaining 2 passes from 10 hours to 6 hours in weeks 11 - 13. (1, 2)

☺ MGS move mapping and beta supplement passes, 2 in week 09 and 3 in week 10, from the 34BWG1 to DSS-24,45,54 and MSPA 2 passes per week with M01O. Move the 2 – 3 mapping and beta supplement passes in weeks 11 – 13 from DSS-25,34,55 to the 34BWG2 and MSPA with M01O. (2)

☺ MSGR move support in weeks 09 -13 from DSS-24,34,55 to DSS-24,45,55. (2)

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS (Continued)

☺ RFC CAT M&E move one 24-hour support from DSS-14\63 to DSS-25\55 in week 12 and use for X/Ka-band catalog development. Move Clock Sync support in week 09 from DSS-14\63 to DSS-15\63 and in weeks 11 and 13 from DSS-14\63 to DSS-15\65. (1)

☺ SOHO reduce 70M/26M keyhole supports from 10 passes to 7 passes in week 10 and from 14 passes to 10 passes in week 11. Move keyhole supports in weeks 09, 10, 12, and 13 from the 34BWG1 to DSS-24,54,45/46. (1, 2)

☺ ULYS move support from DSS-63,15 to DSS-14,43 and reduce pass duration from 10 hours to 8 hours in weeks 09 and 10. Move routine support in weeks 11 – 13 from the 34BWG1 to DSS-24,54,45, move the 4 passes in week 12 from DSS-34,54 to DSS-24,54,45 and reduce support from 10 hours to 6 hours. (1, 2)

☺ VGR1 delete two 8-hour DSS-63 passes in each week. (1)

☺ WIND move all passes from the 34BWG1 to DSS-24,54. (2)

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate throughout this period for DSS routine and bearing maintenance, M01O mapping, MEX orbital science, MGS mapping and beta supplement, RFC CAT M&E, VGR1 routine support, and VGR2 ASCAL in week 11. The contention is due to oversubscription in the Mars project's view period, RFC 24-hour support in weeks 11 and 12, and view period overlap with daylight maintenance and compounded by additional loading of DSS-65 approved downtime and for the proposed downtime for DSS-34.

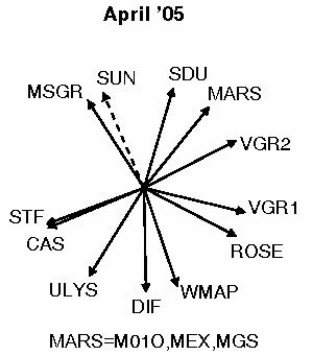
2. (34BWG1) The projected unsupportable time is moderate to severe for DSS maintenance, MGS mapping and beta supplement, ROSE Earth swingby, SOHO keyhole event, and WIND. The contention is caused by oversubscription in the Sun view period and view period overlap with daylight maintenance, compounded by additional loading caused by DSS-65 approved downtime and the proposed downtime for DSS-34. CHDR, CLU2, DIF, DSN Ant Cal, IMAGE, MGS, Hayabusa (MUSES-C), SOHO keyhole event, ULYS, VGR 2 and WIND have contention with the proposed DSS-34 downtime for X/X-Ka Band Installation.

Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17)



EVENTS

DSS-15 approved downtime (microwave subsystem controller) beginning in week 17

DSS-34 proposed downtime (X/X-Ka band) ending in week 14

DSS-65 approved downtime (antenna controller replacement, life extension and relocation)

Cassini tour

Deep Impact Flyby TCM in weeks 16 and 17

Goldstone Solar System Radar Mercury observations with Arecibo in week 14

Hayabusa asteroid rendezvous

Voyager 1 DTR array P/B in week 17, DOY 118

Wind TCM in week 15, DOY 104

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

☺ DSS-34 approve downtime for X/X-Ka Band installation ending in week 14.

☺ Chandra move 14 of 21 from the 34BWG1 subnet to DSS-24,54, move the remaining 7 passes on the 34BWG1 to the 26M subnet and increase pass duration from 1 hour to 2 hours in week 14. (2)

☺ CLU2 delete request for DSS-34 for SSO supports and use DSS-46/45/43 in week 14 and delete request for DSS-15 support in week 17 and use DSS-16/27/24 only. (2, 3)

☺ DIF move cruise supports from DSS-15,34,54 to DSS-15,45,54 in week 14 and delete request for DSS-15 in week 17 for TCM support and use DSS-26,34,54. (2, 3)

☺ DSN Antenna Calibration delete week 17 support and reschedule support in week 19.

☺ Hayabusa (MUSES-C) move rendezvous passes in week 14 from DSS-25,34,55 to DSS-25,45,54. (3)

☺ IMAG move routine and science load supports from the 34BWG1 to DSS-24,45/46,54 in week 14. (2)

GBRA move M-Wave Spectroscopy from the 70M to DSS-43 only and delete New Proposals in weeks 09 and 10. Reduce Planetary Radio Astronomy from 9 hours to 6 hours.

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS (Continued)

☺ M01O move 3 of 7 mapping passes per week from the 70M and MSPA with MEX at DSS-14,63. Move remaining 4 mapping passes from the 70M to DSS-43 and MSPA 4 passes in week 17 with MGS. (1)

☺ MEX MSPA 3 of 7 orbital science and occultation passes per week at DSS-14,63 with M01O, reduce 3 of the 4 remaining DSS-14,63 passes in weeks 14, 15 and 17 from 10.8 hours to 5 hours and use DSS-63 only. Reduce 3 of the 4 remaining DSS-14,63 passes in week 16 from 10.8 hours to 6 hours and use DSS-14 only. Delete the remaining 1 pass per week at DSS-14,63. (1)

☺ MGS move 4 of 7 mapping and beta supplement passes in week 17 from DSS-15,45,54 to DSS-43, reduce pass duration from 14 hours to 10 hours, and MSPA with M01O. Add an additional four 4-hour supports in week 17 to maintain MGS contiguous 14-hour support on the 34BWG2. (2)

☺ MSGR move support in week 14 from DSS-24,34,55 to DSS-24,45,55. (2)

☺ SDU move passes in week 17 from DSS-15,45 to DSS-24,45. (2)

☺ ULYS move routine support in week 14 from the 34BWG1 to DSS-24,54,45 and reduce support from 10 hours to 6 hours. (1, 2)

☺ VGR1 delete two 8-hour DSS-63 passes in each week and move week 17 DTR playback support from DSS-14/15 to DSS-14/24,25. (1)

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS (Continued)

☺ WIND move all passes from the 34BWG1 to DSS-24,54 in week 14. (2)

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17) (continued)

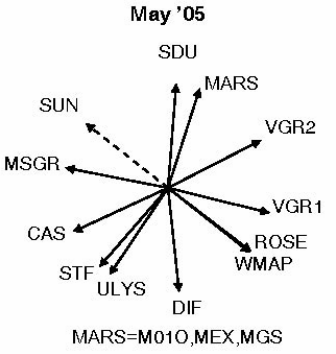
ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for DSS routine maintenance, M01O mapping, MEX orbital science, MGS mapping and beta supplement, RFC CAT M&E, VGR1 routine support and DTR array playback and extreme for DSS bearing maintenance. The contention is due to oversubscription in the Mars project's view periods, and view period overlap with daylight maintenance and compounded by additional loading caused by DSS-65 approved downtime, the proposed downtime for DSS-34 ending in week 14, and the proposed downtime for DSS-15 beginning in week 17.
2. (34HEF) Cassini, CLU2, DIF, DSN Ant Cal, MGS, SDU, and VGR1 have contention with the proposed downtime for DSS-15 in week 17.
3. (34BWG1) CHDR, DIF, IMAGE, MGS, Hayabusa (MUSES-C), ULYS, and WIND have contention with the proposed DSS-34 downtime for X/X-Ka Band Installation ending in week 14.

Contention levels on the, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21)



EVENTS

DSS-15 Proposed downtime (microwave subsystem controller) ending in week 18

DSS-65 approved downtime (antenna controller replacement, life extension and relocation) ending in week 21

Cassini tour

Deep Impact Flyby TCM in weeks 18 – 20 and comet approach beginning in week 20

Gravity Probe-B quarterly epoch in week 20

Ground Based Radio Astronomy RA500 SOC-M4 quarterly epoch in week 21

Hayabusa asteroid rendezvous

Voyager 1 ASCAL and MAGROL in week 18, DOY 123 and 126

Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21) (continued)

RECOMMENDATIONS

☺ DSS-15 approve downtime for microwave subsystem controller.

☺ CAS delete request for DSS-15 in week 18 for Tour support and use DSS-24,25,26,54,55. (2)

☺ CLU2 delete request for DSS-15 in week 18 for SSO support and use DSS-16/27/24 only. (2)

☺ DIF delete request for DSS-15 in week 18 for TCM support and use DSS-26,45,54. (2)

☺ DSN reduce 8-hour antenna calibrations at 70M to 4 hours in weeks 18 – 20. (1)

GBRA reduce two 9-hour M-Wave Spectroscopy observations per week to 6 hours. Reduce one 9-hour New Proposal support per week to 6 hours. Reduce one 9-hour Planetary Radio Astronomy support per week to 6 hours. Move 24-hour RA500 array support at DSS-14\63 from week 21 to week 22 and split into three 8-hour supports. Delete 8-hour VLBA array support at DSS-14\63 in week 19. (1)

☺ GPB move BR088N 70M observations from week 20 to week 19. (1)

Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21) (continued)

RECOMMENDATIONS (Continued)

☺ M01O reduce four of seven 10-hour mapping passes at DSS-14,63 to 7 hours and move all support to DSS-43. Maximize MSPA capability, MSPA with MGS all remaining MGS passes in week 18 at DSS-24,45,54 and at DSS-15,45,55 and 4 to 5 passes per week in weeks 19 -21 at DSS-15,45,55. (1, 2)

☺ MEX reduce one to three 10.8-hour Orbital Science/Occultation passes per week at the 70M to 6 hours. (1)

☺ MGS move 4 of 7 mapping and beta supplement passes in week 18 from DSS-15,45,55 to DSS-43, reduce pass duration from 14 hours to 10 hours and MSPA with M01O. To maintain MGS 14 hour contiguous support, add four 4-hour passes in week 18 on the 34BWG2 and maximize MSPA capability, MSPA with M01O all remaining MGS passes in week 18 at DSS-24,45,54 and at DSS-15,45,55 and 4 to 5 passes per week in weeks 19 -21 at DSS-15,45,55. (2)

☺ SDU move week 18 passes from DSS-15,45 to DSS-24,45. (2)

☺ STF move week 18 passes from DSS-15,45,55 to DSS-25,45,54. (2)

☺ ULYS move passes in week 18 from DSS-63,15 to DSS-63,24,54. (2)

☺ VGR2 reduce seven 8-hour passes at DSS-43 to 6 hours and use DSS-43,45. (1)

Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21) (continued)

ANALYSES

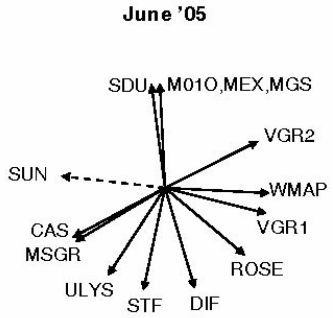
1. (70M) Severe unsupportable time is forecast for DSS Maintenance. Contention is due to the requirements supporting GPB, multiple GSSR activities, M01O mapping and MEX bi-static radar on the subnet. The maintenance and GPB view periods overlap the Mars project's view periods between 80% to 100%.
2. (34HEF) Cassini, CLU2, DIF, MGS, SDU, STF, and ULYS have contention with the proposed downtime for DSS-15 in week 18.

Contention levels on the 34BWG1, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – June (Weeks 22 - 26)



EVENTS

DSS-25 proposed downtime (microwave subsystem controller) in weeks 22 and 23

DSS-24 approved downtime (microwave subsystem controller) in week 26

DSS-65 proposed downtime extension (antenna controller replacement, life extension and relocation) in weeks 22 - 26

Cassini tour

Deep Impact Flyby comet approach in weeks 22 – 25 and comet encounter in week 26

European VLBI Network E500 quarterly epoch in week 22

Goldstone Solar System Radar Mercury support beginning in week 25

Hayabusa asteroid rendezvous in week 22 and trim-5 maneuver in weeks 23 and 24

SOHO keyhole support in weeks 22 – 25, maneuver in week 24, and HSO beginning in week 26

ST5 launch DOY 178, and launch phase support beginning in week 26

Voyager 2 MAGROL in week 24, DOY 168

Events, Recommendations and Analyses

2005 – June (Weeks 22 - 26) (continued)

RECOMMENDATIONS

☺ DSS-25 approve downtime for microwave subsystem controller.

☺ DSS-65 approve proposed downtime extension for antenna controller replacement, life extension and relocation.

☺ CAS delete request for DSS-25 in weeks 22 and 23 and use DSS-24,26,54,55,65 and change antenna selection for DSS-14/25 array to DSS-14/26. Move one to two 9-hour tour array passes from DSS-14/25,63/65 to DSS-14/25,63/55 in weeks 23 and 25. Move three to nine 9-hour tour passes per week from DSS-15,24,25,26,54,55,65 and DSS-15,25,26,54,65 to DSS-15,24,25,26,54,55 in weeks 22 - 25 and to DSS-15,25,26,54,55 in week 26. (1,3)

☺ DSN move DSS-65 antenna calibration from week 23 to week 27. (1)

☺ Hayabusa (MUSES-C) change antenna selection for week 22 rendezvous and for week 23 TRIM-5 support from DSS-25,45,54 to DSS-26,45,54. (3)

☺ MSGR change allocated resources from DSS-26,34,55 to DSS-26,55 in week 26. (2)

Events, Recommendations and Analyses

2005 – June (Weeks 22 - 26) (continued)

RECOMMENDATIONS (Continued)

☺ RFC move CAT M&E support from weeks 23 and 24 to weeks 26 and 27; perform the DSS-15\45 support in week 26 and the DSS-15\65 support in week 27. Change DSS-15\65 Clock Sync support to use DSS-14\63 and move from weeks 23 and 25 to weeks 22 and 24. (1)

☺ ULYS reduce 4 DSS-15,63 passes from 10 hours to 8 hours and move to DSS-14,63 in week 26. (1)

Events, Recommendations and Analyses

2005 – June (Weeks 22 - 26) (continued)

ANALYSES

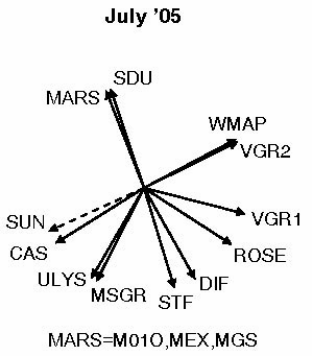
1. (34HEF) CAS tour, DSN antenna calibration, RFC CAT M&E, clock synchronization and ULYS have contention with the proposed downtime at DSS-65.
2. (34BWG1) moderate unsupportable time is forecast for MSGR in week 26. Contention is at DSS-34 due to the ST5 launch and requirements for DSS Maintenance and WIND.
3. (34BWG2) Cassini and Hayabusa has contention with the proposed downtime for DSS-25.

Contention levels on the 70M, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – July (Weeks 27 - 30)



EVENTS

DSS-43 approved downtime (antenna controller replacement) beginning in week 29

DSS-54 proposed downtime (microwave subsystem controller) in week 28

DSS-55 proposed downtime (microwave subsystem controller) in week 27

Cassini tour

Deep Impact Flyby comet encounter, comet impact in week 27, DOY 185, and P/B beginning on DOY 187

Goldstone Solar System Radar Mercury support ending in week 29 and Mercury/Arecibo beginning in week 30

MESSENGER TCM in week 30

SOHO HSO continuous support

ST5 Phase A and B support in week 27

Wilkinson Microwave Anisotropy Probe maneuver in week 27

Wind TCM in week 28, DOY 194

Events, Recommendations and Analyses

2005 – July (Weeks 27 - 30) (continued)

RECOMMENDATIONS

☺ DSS-54 approve downtime for microwave subsystem controller in week 28

☺ DSS-55 approve downtime for microwave subsystem controller in week 27

☺ CAS move nine 9-hour tour passes from DSS-15,24,25,26,54,55,65 to DSS-15,24,25,26,54,65 in week 27 and three 9-hour tour passes from DSS-15,24,25,26,54,55,65 to DSS-15,24,25,26,55,65 in week 28. (2, 3)

☺ CHDR change fourteen 1-hour passes allocated at 34BWG1 to DSS-24,34 and move seven passes to 26M and increase to 2 hours in week 28. (2)

☺ DSN reduce 70M antenna calibrations from 8 hours to 4.5 hours in week 27 – 30. (1)

GBRA change one 24-hour Host Country support to three 8-hour supports in week 28. Reduce M-Wave Spectroscopy support from 9 hours to 4 hours in all weeks. Reduce New Proposals support from 9 hours to 4 hours in all weeks. Planetary Radio Astronomy from 9 hours to 4 hours in all weeks. (1)

☺ IMAG move one 1.5-hour science load pass and thirteen 0.8-hour passes from the 34BWG1 to DSS-24,34 in week 28. (2)

Events, Recommendations and Analyses

2005 – July (Weeks 27 - 30) (continued)

RECOMMENDATIONS (Continued)

☺ M01O reduce seven 10-hour passes from DSS-14,63 to 8 hours and move to DSS-63 only in weeks 29 and 30. Maximize MSPA capability, MSPA an additional 7 passes in weeks 29 and 30 with MGS on the 34HEF subnet. (1)

☺ MEX move seven 6-hour passes from DSS-24,54 to DSS-26,55 in week 28. Reduce all 7 orbital science and occultation passes from 10.8 hours to 8 hours in weeks 29 and 30. (1, 2)

☺ MGS move two 10-hour 34BWG1 mapping and beta supplement passes to DSS-24,34,65 in week 28. Maximize MSPA capability, MSPA an additional 7 passes in weeks 29 and 30 with M01O on the 34HEF subnet. (2)

☺ MSGR move allocated support from DSS-24,34,55 to DSS-24,34,54 in week 27. (3)

☺ STF move allocated support from DSS-15,45,55 to 34HEF in week 27. (3)

☺ ULYS move 4 passes from 34BWG1 to DSS-24,34 in week 28. (2)

☺ WIND move allocated support from 34BWG1 to DSS-24,34 in week 28. (2)

☺ VGR1 move seven 8-hour passes from DSS-55 to DSS-54 in week 27. (3)

☺ VGR2 reduce 6 passes from 16-hours to 8-hours in week 27 and 28. (1)

Events, Recommendations and Analyses

2005 – July (Weeks 27 - 30) (continued)

ANALYSES

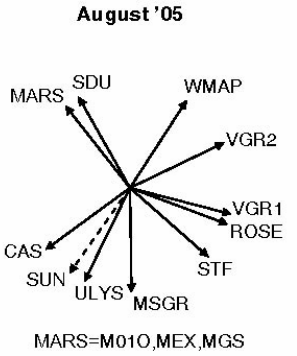
1. (70M) Moderate unsupportable time is forecast for DSS Maintenance, GBRA, GPB, GSSR and M01O. Contention is due to requirements supporting CAS in week 28 and the periods required for antenna maintenance. Also the MEX 10.8-hour request requires some support from both Goldstone and Madrid to fulfill the number of hours requested which conflicts with support requested for M01O and WMAP. The contention in weeks 29 - 31 is compounded by the DSS-43 downtime.
2. (34BWG1) Requirements supporting CAS, CHDR, DIF, IMAG, MEX, MGS, ULYS and WIND are in contention with the proposed DSS-54 downtime in week 28.
3. (34BWG2) Requirements supporting CAS, MSGR, STF and VGR1 are in contention with the proposed DSS-55 downtime in week 27.

Contention levels on the 34HEF, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – August (Weeks 31 - 34)



EVENTS

DSS-43 approved downtime (antenna controller replacement)

Cassini tour

Deep Impact Flyby playback and EOM in week 31, DOY 217

Goldstone Solar System Radar Asteroid 1992UY4 in week 31 and Mercury observation with Arecibo ending in week 31

Mars Reconnaissance Orbiter launch in week 32 (August 10) and TCM

MESSENGER Venus flyby 2 beginning in week 32

SOHO HSO continuous

Voyager 1 MAGROL in week 31, DOY 218

Events, Recommendations and Analyses

2005 – August (Weeks 31 - 34) (continued)

RECOMMENDATIONS

☺ CAS move DSS-24,25,26,54,55,65 passes to DSS-24,25,54,55 in weeks 33 and 34. (2)

☺ DIF move the pass in week 31 from DSS-15,34,54 to DSS-26,34,54. (2)

☺ DSN reduce DSS-14 and DSS-63 Antenna Calibration support from 8 hours to 5 hours. (1)

☺ DSS reduce 1 of 2 DSS-14 routine maintenance supports per week from 8 hours to 6 hours in weeks 31 – 33. Reduce DSS-63 routine maintenance from 9.5 hours to 8 hours in weeks 32 and 33. (1)

GBRA delete M-Wave Spectroscopy at DSS-63 in week 31 and delete support at DSS-14,63 in week 33. Delete New proposals at DSS-14,63 and Planetary Radio Astronomy at DSS-14 in weeks 31 and 33. Reduce remaining M-Wave Spectroscopy and New Proposals at DSS-14,63 and Planetary Radio Astronomy at DSS-14 from 9 hours to 5 hours in weeks 32 and 34. (1)

☺ GSSR reduce 4 Asteroid 1992UY4 supports from 6 hours to 4 hours and move Mercury support with Arecibo from week 31 to week 33. (1)

Events, Recommendations and Analyses

2005 – August (Weeks 31 - 34) (continued)

RECOMMENDATIONS (Continued)

- ☺ M01O move the 4 standalone passes from DSS-63 to DSS-14,63 and MSPA with MEX, reduce the three standalone passes at DSS-14,63 from 10 hours to 8 hours, and move to DSS-63 only in week 31. Reduce the 7 DSS-14,63 standalone passes from 10 hours to 8 hours and MSPA 4 of the 7 passes per week with MEX in weeks 32 - 34. M01O maximize MSPA capability, MSPA 7 additional passes with MGS on the 34BWG1 and 34BWG2 subnets. (1)
- ☺ MEX reduce all 7 orbital science and occultation passes from 10.8 hours to 8 hours, move passes from DSS-14,65 to DSS-14,63, and MSPA 4 of the 7 passes per week with M01O. (1, 2)
- ☺ MGS move the seven 14-hour passes from the 34H to DSS-25,34,54. MGS maximize MSPA capability, MSPA 7 passes with M01O on the 34BWG1,34BWG2 subnets. (2)
- ☺ MSGR move Venus flyby passes from the 34HEF to DSS-26,55,34 in weeks 33 and 34. (2)
- ☺ SDU move passes from the 34H to the 34BWG1 in weeks 31, 33, and 34. (2)

Events, Recommendations and Analyses

2005 – August (Weeks 31 - 34) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for DSS routine and bearing maintenance, GBRA activities, M-Wave Spectroscopy and Planetary Radio Astronomy, M01O, MEX orbital science and occultation and VGR2 MAGROL. The projected unsupportable time is severe for GSSR Asteroid 1992UY4 in week 31 and M01O in week 33. The moderate unsupportable time is due to view period overlap in the daylight maintenance view and in the Mars Project's view periods. The severe unsupportable time is caused by M01O and MEX sharing the same view period and their requirement for 10-hour supports and VGR 1 MAGROL and GSSR Asteroid 1992UY4 support at DSS-14 only overlap with DSS maintenance compounded by the approved downtime for DSS-43.

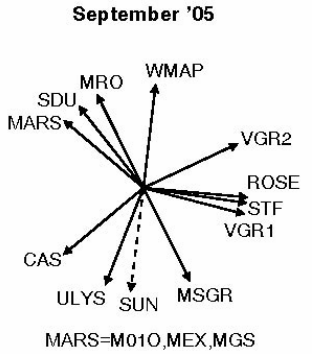
2. (34HEF) The projected unsupportable time is moderate for Cassini and VGR2 in weeks 33 and 34 and severe for DSS maintenance and MEX orbital science and occultation. The unsupportable time is caused by view period overlap in the daylight maintenance view period and the 9 to 10.8-hour requirements for Cassini and MEX coupled with the launch and launch phase requirements for MRO and the requirements for MSGR Venus flyby 2.

Contention levels on the 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39)



EVENTS

DSS-43 approved downtime (antenna controller replacement)

Cassini tour

Goldstone Solar System Radar Asteroid 1999Q36 in weeks 37 and 38 and Asteroid 1998R01 in weeks 38 and 39

Mars Reconnaissance Orbiter launch support ending in weeks 36 and calibration

MESSENGER TCM and Venus flyby 2 ending in week 36

SOHO keyhole support beginning in week 36, DOY 244, and keyhole maneuver in week 38

Voyager 2 DTR P/B in week 36, DOY 250, ASCAL and MAGROL in week 37, DOY 256 and DOY 259

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS

☺ CAS change the resources allocated on 5 - 6 passes at DSS-15,24,25,26,54,55,65 to DSS-24,25,26,54,55 in weeks 35 and 36 and change the 1 pass allocated at DSS-14,63 to DSS-63 only in week 38. (1, 2)

☺ DSN reduce DSS-14 and DSS-63 antenna calibrations in weeks 36 and 38 and the DSS-65 calibration in week 36 from 8 hours to 4.5 hours. (1, 2)

☺ DSS move the DSS-14 bearing maintenance from week 38 to week 39 and move the Monday DSS-14 routine maintenance to Friday and move DSS-27 maintenance to Monday in week 39. (1)

GBRA reduce Microwave Spectroscopy, New Proposals, and Planet Radio Astronomy support from 9 hours to 4 hours per support in all weeks. Reduce the week 36 VLBA SOC M-4 support from 9 hours to 4 hours and move to week 35. (1)

☺ GSSR reduce the Asteroid 1999RQ36 supports requested in weeks 37 - 38 from 8 hours to 4 hours per support and delete the GODR support in week 38. Change Asteroid 1998R01 request to DOY 267 – DOY 269 with 2 passes requested in week 38 and 1 pass requested in week 39 (1)

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS (continued)

☺ M01O reduce the pass duration on all DSS-14,63 standalone and on 3 MSPA tracks with MGS from 10 hours to 8 hours in all weeks and use DSS-63 only. Change 3 standalone passes in weeks 37 - 39 to MSPA with MGS. Maximize MSPA capability, MSPA an additional 6 - 7 passes per week with MGS on the 34BWG2 in weeks 35 and 36 and on the 34BWG1 in weeks 37 - 39. (1, 2)

☺ MEX reduce the pass duration on all DSS-14,65 tracks from 10.8 hours to 8 hours in all weeks. (1, 2)

☺ MGS reduce 3 DSS-14,63 MSPA passes with M01O from 10 hours to 8 hours and use DSS-63 only in week 36. In weeks 37 - 39 reduce three 34HEF passes from 14 hours to 8 hours and MSPA the 3 passes with M01O at DSS-63. Maximize MSPA capability, MSPA the remaining 6 – 7 passes per week with M01O on the 34BWG2 in weeks 35 and 36 and on the 34BWG1 in weeks 37 - 39. Add three 4-hour passes in weeks 37 - 39 on the 34BWG2 to maintain MGS 14-hour contiguous support requirement. (1, 2)

☺ MRO change the launch support allocated at 34H to DSS-15,45,55 in weeks 35 and 36. (2)

☺ RFC move the 24-hour CAT M&E pair from weeks 35 and 36 to weeks 37 and 38. (2)

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS (continued)

SOHO reduce the 70M keyhole request from 12 - 14 passes per week to 7 passes per week in weeks 36 and 37 and from 5 passes to 2 passes in week 38. Reduce the 34BWG1 request from 8 passes to 5 passes in week 38. (1, 3)

Additional support for the SOHO keyhole period will be added on a best effort basis at the 70M/26M, 34BWG1 and/or 34HEF/26M subnets during the Mid-Range Scheduling Process.

☺ ULYS reduce 5 passes at 34BWG1 from 10 hours to 6 hours in week 38. (3)

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39) (continued)

ANALYSES

1. (70M) Moderate to severe unsupportable time is forecast for DSN, DSS, GBRA, GSSR, M01O, MEX, SOHO and WMAP. Contention is a result of loading at Goldstone and Madrid in the Mars view period during the downtime planned at DSS-43, the new requirements to support the GSSR Asteroid 1999Q36 and 1998R01 observations, and the requirements for the SOHO keyhole events. Also the view periods for the flight missions, asteroids, and periods of antenna maintenance consume all but a few hours in each day which impacts the DSN and GBRA requests for support.

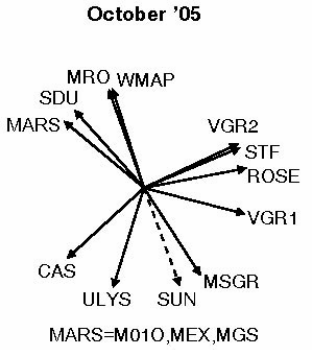
2. (34HEF) Severe to extreme unsupportable time is forecast for DSS Maintenance and MEX in weeks 35 and 36 and moderate for MGS and MRO in weeks 37 - 39. Contention in weeks 35 and 36 is due to the MRO request for continuous and near continuous post launch support that conflicts with MEX and maintenance at DSS-65, and with CAS, MGS, MEX and SDU requests for support in weeks 37 - 39.

3. (34BWG1) Moderate unsupportable time is forecast for DSS Maintenance, ULYS and WIND in week 38. Contention is due to >80% overlap of the DSS, CAS, Hayabusa, MSGR, SOHO, ST5, ULYS, and WIND view periods.

Contention levels on the 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2005 – October (Weeks 40 - 43)



EVENTS

DSS-43 approved downtime (antenna controller replacement)

Cassini tour

Goldstone Solar System Radar Mars Radar Observation

Stardust TCM support in weeks 42 and 43

Voyager 1 DTR array P/B in week 43, DOY 299

Wilkinson Microwave Anisotropy Probe maneuver in week 43

Wind TCM in week 41, DOY 286

Events, Recommendations and Analyses

2005 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

☺ DSN reduce antenna calibrations at DSS-14 and DSS-63 from 8 hours to 4.5 hours in weeks 40 and 43. (1)

GBRA reduce DSS-63 Host Country, Microwave Spectroscopy, New Proposals, and Planet Radio Astronomy support from 8 - 9 hours to 5 hours per support in all weeks. Reduce the VLBA SOC-M4 support from 8 hours to 4 hours in week 40 and the DSS-45 Host Country from 12 hours to 8 hours in week 43. (1, 2)

GSSR reduce 2 DSS-14/25 Mars supports per week from 8 hours to 4 hours. (1)

☺ M01O reduce 7 passes per week from 10 hours to 8 hours and change the allocated resources on the 7 passes from DSS-14,63 to DSS-63 only. Change 2 standalone passes to MSPA at DSS-63 with MGS in week 42. Maximize MSPA capability, MSPA 5 - 7 passes per week with MGS on the 34HEF and 2 passes on the 34BWG1 in week 42. (1, 2)

☺ MEX reduce 7 DSS-14\65 passes per week from 10.8 hours to 8 hours. (1)

☺ MGS reduce seven 34HEF passes per week from 14 hours to 12 hours in weeks 40, 41, and 43. In week 42, reduce five 34HEF passes to 12 hours and 2 passes to 8 hours; change the two 8-hour passes to MSPA with M01O at DSS-63. Maximize MSPA capability, MSPA 5 - 7 passes per week with M01O on the 34HEF and 2 passes on the 34BWG1 in week 42. (2)

Events, Recommendations and Analyses

2005 – October (Weeks 40 - 43) (continued)

ANALYSES

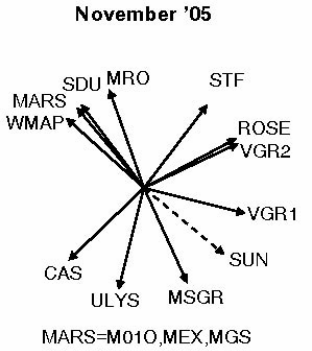
1. (70M) Moderate to severe unsupportable time is forecast for DSN, GBRA, GSSR, M01O, and WMAP. Contention is in the Mars view period and due in part to the new MEX request for 70M support and the increased bi-static radar requirement. The MEX 10.8-hour request requires some support from both Goldstone and Madrid to support the number of hours requested which conflicts with support requested for M01O and WMAP.

2. (34HEF) Moderate unsupportable time is forecast for GBRA Host Country and MGS. Requirements supporting MGS and MRO have contention with MEX at DSS-65 and the 12-hour GBRA support.

Contention levels on the 34BWG1, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47)



EVENTS

DSS-43 approved downtime (antenna controller replacement)

Cassini tour

Goldstone Solar System Radar Mars Radar Observations ending in week 46, Venus RSD at DSS-14\GBT in weeks 45 and 47, Asteroid 1862 Apollo in weeks 45 and 46, and Mars RSD at DSS-63\Arecibo beginning in week 45

Ground Based Radio Astronomy RA500 SOC-M4 24-hour quarterly event at DSS-14\63 in week 44

Hayabusa asteroid departure in week 46, DOY 319

Mars Reconnaissance Orbiter TCM in weeks 44 and 45

Stardust TCM support in week 46

Voyager 1 ASCAL in week 44, DOY 305, and MAGROL in week 44, DOY 308

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47) (continued)

RECOMMENDATIONS

☺ DSN reduce the DSS-14 and DSS-63 antenna calibrations from 8 hours to 4.5 hours in weeks 45 and 47. (1)

☺ EVN move the calibration pass from week 46 to week 45. (1)

GBRA reduce the Host Country, M-wave Spectroscopy, New Proposals, and Planet Radio Astronomy supports from 8 - 9 hours to 4 hours per support in all weeks. (1)

GSSR reduce 5 Asteroid 1862 Apollo supports from 8 hours to 4 hours in week 44 and move three supports to week 45, reduce the DSS-14/25 Mars supports from 7 hours to 4 hours in weeks 44 - 46, and reduce the GODR support in weeks 44 and 46 from 8 hours to 4 hours. (1, 2)

☺ M01O change the allocated resources on 7 standalone passes in weeks 44, 45 and 47 and on 7 MSPA passes with MGS in week 46 from DSS-14 to DSS-63. (1)

☺ MEX reduce 7 DSS-14,65 passes per week from 10.8 hours to 8 hours. (1, 2)

☺ MGS change the allocated resources on 7 MSPA passes with M01O from DSS-14 to DSS-63 in week 46. (1)

☺ MRO change the allocated resources on six 34HEF passes and use DSS-15,45 only in weeks 46 and 47. (2)

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47) (continued)

RECOMMENDATIONS (continued)

☺ RFC move the week 47 CAT M&E to week 50. (2)

☺ ULYS reduce seven 34BWG1 passes from 10 hours to 6 hours in week 45. (3)

☺ VGR2 reduce 7 DSS-34,45 passes per week from 8 hours to 5 hours in weeks 46 and 47. (2, 3)

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47) (continued)

ANALYSES

1. (70M) Moderate unsupportable time is forecast for DSN, EVN, GBRA, GSSR, MEX and WMAP and extreme for M01O. Contention in the Mars view period is due in part to the new MEX request for 70M support, the increased bi-static radar requirement, and the need for some support from both Goldstone and Madrid to support the MEX request for 10 to 11 hours daily. DSS-43 is not available to support the other Mars projects on the subnet. Also the GSSR Asteroid 1862 Apollo observation has contention in week 44 with DSS Maintenance and the Voyager 1 MAGROL request at DSS-14.

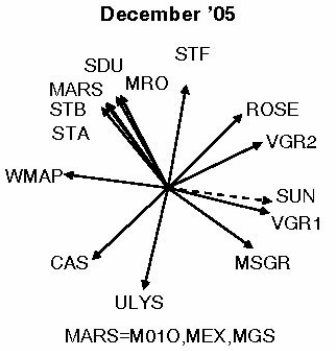
2. (34HEF) Moderate unsupportable time is forecast for GSSR, MEX and MGS in weeks 46 and 47. Contention is primarily at DSS-45 and DSS-65 with requirements supporting MEX orbital science and occultation, MGS mapping, MRO, SDU maneuvers and VGR2.

3. (34BWG1) Moderate unsupportable time is forecast for MGS, VGR2, and WIND in week 45. Contention is primarily at DSS-34 due to requirements supporting MGS, MRO, SDU TCM, ULYS, and VGR2. The SDU and Mars project's view periods are fully overlapped in this week.

Contention levels on the 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52)



EVENTS

DSS-43 approved downtime (antenna controller replacement) ending in week 52

Cassini tour

Goldstone Solar System Radar Mars Radar RSD at DSS-63/Arecibo ending in week 48 and Mercury Radar in week 48

Mars Express occultation in weeks 48 - 51

Mars Reconnaissance Orbiter TCM in weeks 48 and 49

SOHO keyhole event in weeks 48 – 51, and keyhole maneuver in week 50

Stardust TCM support in weeks 48 and 52 and Earth entry support beginning in week 52

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52) (continued)

RECOMMENDATIONS

☺ DSN reduce antenna calibration at DSS-14 in week 49 and DSS-63 in week 51 from 8 hours to 4.5 hours. (1)

GBRA reduce VLBA SOC-M4 support from 8 hours to 6 hours in week 49 and reduce New Proposals and Planet Radio Astronomy supports from 9 hours to 4.5 hours in weeks 49 and 50. Reduce DSS-63 Host Country support from 8 hours to 4.5 hours in week 50 and DSS-45 supports from 12 hours to 6 hours in weeks 49 and 52. Reduce M-wave Spectroscopy support from 9 hours to 4.5 hours in weeks 50 and 51. (1, 2)

☺ GSSR reduce the GODR support from 8 hours to 4 hours in week 50. (1)

☺ M01O change 4 - 7 passes per week from 10 hours to 7 hours, change the resources from DSS-14,63 to DSS-63 only, and MSPA 7 passes per week with MGS. Maximize MSPA capability, MSPA 6 passes in week 48 and 7 passes per week in weeks 49 – 52 with MGS on the 34HEF. (1, 2)

☺ MEX reduce 7 passes per week at DSS-14\65 from 10.8 hours to 8 hours. (1, 2)

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52) (continued)

RECOMMENDATIONS (continued)

☺ MGS change four 14-hour and three 10-hour 34HEF passes to 7 hours, MSPA the 7 passes with M01O at DSS-63, and reduce the remaining 10-hour pass at the 34HEF to 8 hours in week 48. In weeks 49 – 53, reduce 2 - 3 passes per week to 8 hours, reduce the remaining 7 passes per week to 7 hours and MSPA with M01O at DSS-63. Maximize MSPA capability, MSPA 6 passes in week 48 and 7 passes per week in weeks 49 – 52 with M01O on the 34HEF. Add an additional four 4-hour passes in week 48 and two 4-hour passes in weeks 49 – 52 on the 34BWG1, 34BWG2 subnets to maintain MGS contiguous 14-hour and 10-hour support requirement. (2)

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52) (continued)

ANALYSES

1. (70M) Moderate unsupportable time is forecast for DSN, GBRA, GSSR, M01O, and SOHO at DSS-14 and DSS-63. Contention in the Mars view period is due in part to the new MEX request for 70M support, the increased bi-static radar requirement, and the need for some support from both Goldstone and Madrid to support the MEX request for 10 to 11 hours daily. DSS-43 is not available to support the other Mars projects on the subnet.

2. (34HEF) Moderate unsupportable time is forecast for DSN, GBRA and MGS. The MGS request for 8 - 10 passes per week of 10 - 14 hours per pass is in contention with support requested for MEX, MRO, and SDU TCM. The SDU and Mars Project's view periods are fully overlapped.

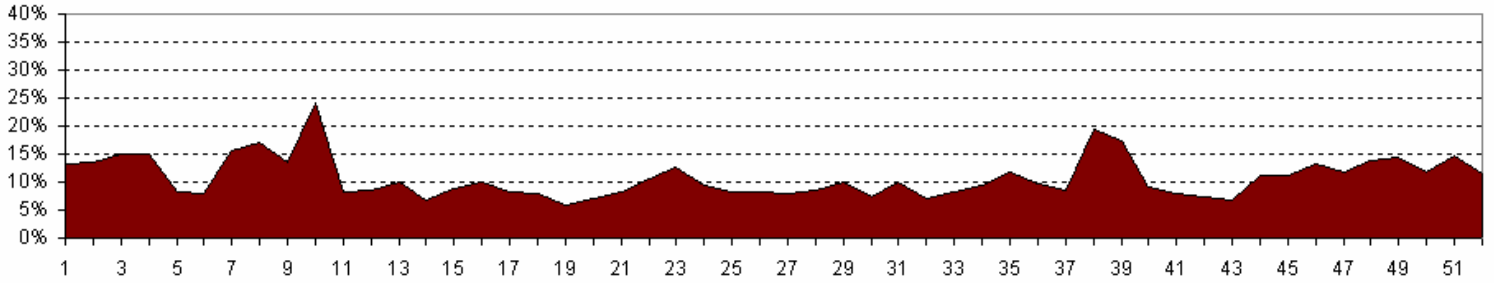
Contention levels on the 34BWG1, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

2006 Events, Analysis and Recommendations

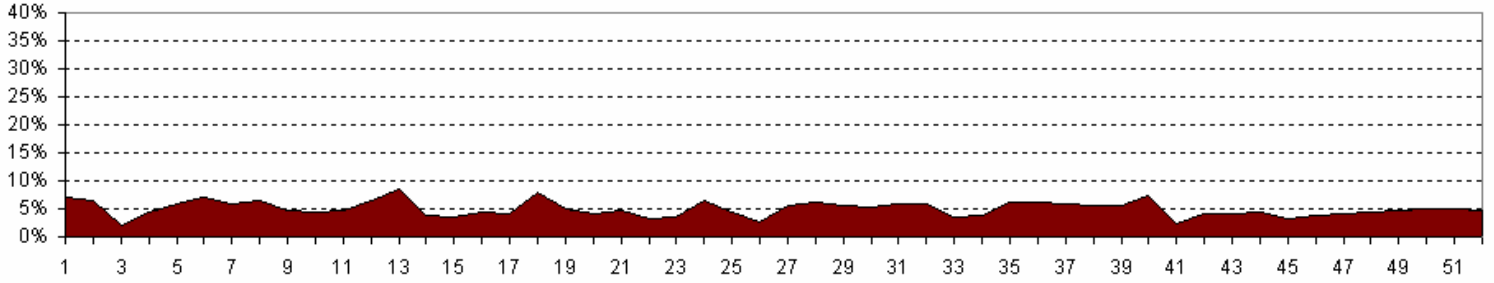
Events, Recommendations and Analyses

2006 Weekly Average User Unsupportable Time

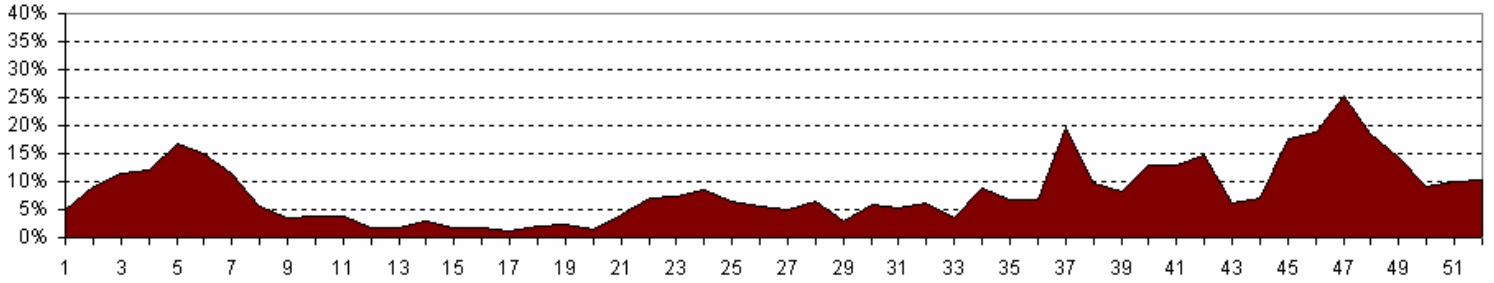
70M



34HEF



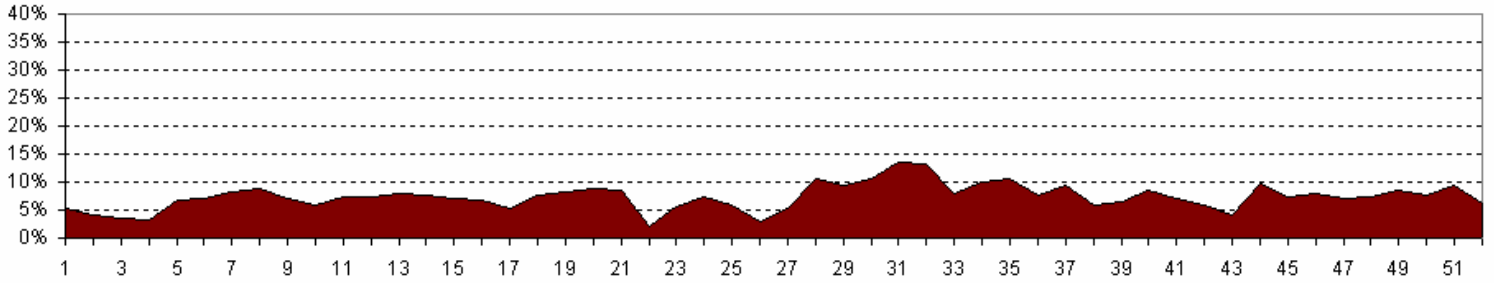
34BWG1



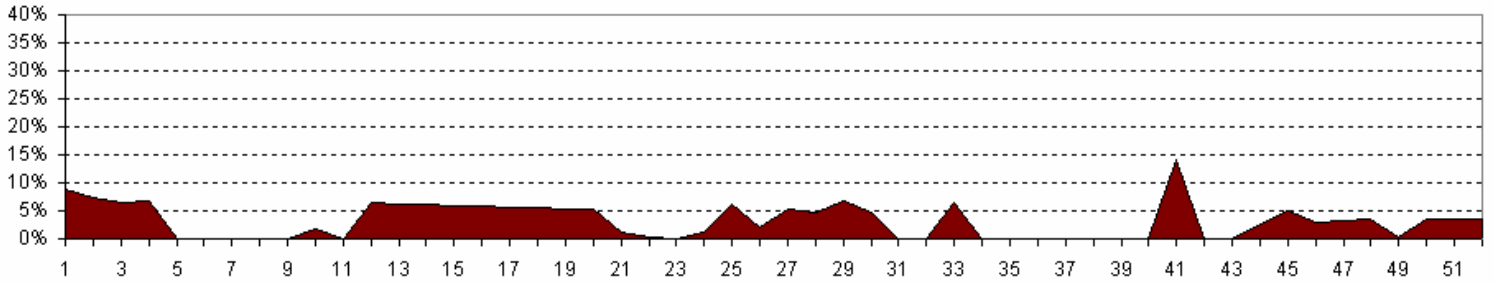
Events, Recommendations and Analyses

2006 Weekly Average User Unsupportable Time

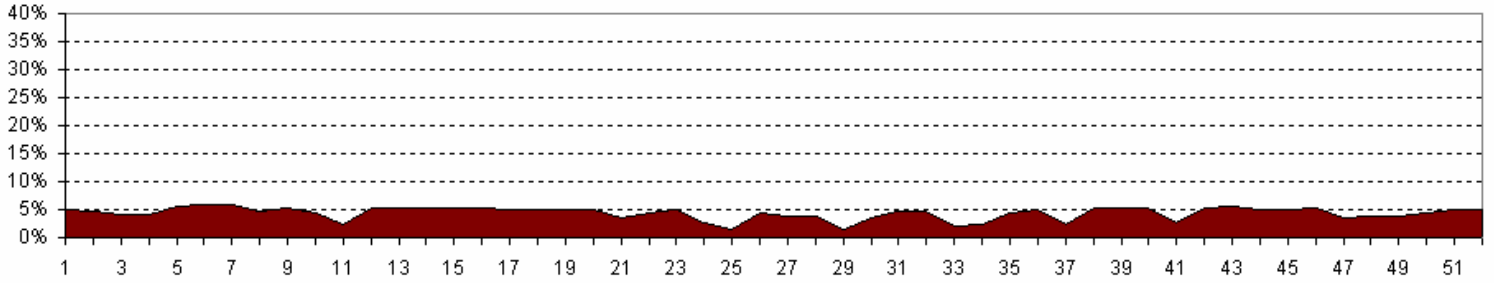
34BWG2



34HSB

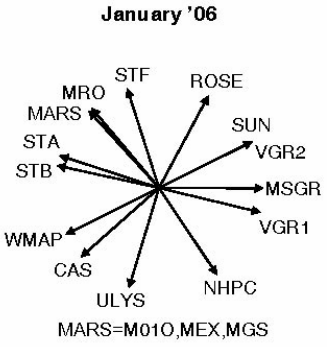


26M



Events, Recommendations and Analyses

2006 – January (Weeks 01 - 04)



EVENTS

Cassini tour

Hayabusa (MUSES-C) TCM-3 beginning in week 04, DOY 023

Mars Express orbital science and bi-static radar

Mars Reconnaissance Orbiter approach, Delta DOR in weeks 02 – 04, and TCM-3 in week 04, DOY 029

New Horizons launch and initial acquisition in week 02, DOY 011, and LEOP continuous support beginning in week 02, DOY 011 – 029

Stardust Earth re-entry in weeks 01 and 02, TCM-19 and recovery on DOY 014, and TCM-20 and EOM

Wind TCM in week 01, DOY 008

Events, Recommendations and Analyses

2006 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

☺ DSS reduce maintenance in week 04 at DSS-24 from 8 hours to 6 hours. (2)

☺ CHDR move 10 passes in weeks 03 and 04 from the 34BWG1 to the 26M subnet and increase pass duration to 2 hours. (2)

☺ M01O change three 70M standalone passes per week in weeks 01, 02, and 04 to MSPA 1 of 3 passes with MGS on the 70M and MSPA 2 of 3 passes with MEX at DSS-14,63. (1)

☺ MEX MSPA 1 of 7 passes with M01O and 2 of 7 passes with MGS in weeks 01, 02, and 04 at DSS-14, 63. (1)

☺ MGS change three 70M standalone passes per week in weeks 01, 02, and 04 to MSPA 1 of 3 passes on the 70M with M01O and 2 of 3 passes with MEX at DSS-14, 63. Move remaining 70M passes, 1 in week 01 and 3 in week 04, to the 34BWG2. (1)

☺ MSGR move passes from DSS-26,55 to DSS-26,65 in weeks 02 – 04. (2)

☺ NHPC move 7 of 21 early ops passes from the 34BWG1 subnet to the 34HEF. (2)

☺ ULYS reduce pass duration from 10 hours to 8 hours using DSS-43,34,45. (1)

☺ VGR 2 reduce 4 DSS-43 passes in week 01 from 8 hours to 6 hours and 3 DSS-43 passes in weeks 02 and 03 from 8 hours to 4 hours. (1)

☺ WIND move 5 of 7 passes from the 34BWG1 subnet to DSS-24,54. (2)

Events, Recommendations and Analyses

2006 – January (Weeks 01 - 04) (continued)

ANALYSES

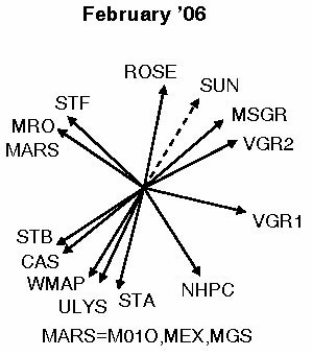
1. (70M) The projected unsupportable time on the 70M subnet is moderate to severe for DSS maintenance, M01O mapping, MGS mapping, and GBRA Host Country. DSS maintenance is in contention with M01O and MGS due to over subscription of resources in the daylight maintenance and Mars project's view periods in weeks 01 and 04 and in contention with Cassini and Mars projects in weeks 02 and 03.

2. (34BWG1) The projected unsupportable time on the 34BWG1 subnet is moderate to severe for DSS Maintenance in weeks 02 – 04 due to view period overlap with MSGR, NHPC, and WIND.

Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Events, Recommendations and Analyses

2006 – February (Weeks 05 - 08)



EVENTS

Cassini tour

EVN E500 J-M4 quarterly epoch at DSS-14\63 in week 08

GBRA RA500 SOC-M4 24-hour quarterly epoch at DSS-14\63 in week 07

Hayabusa (MUSES-C) TCM-3 ending in week 07

Mars Express orbital science and bi-static radar

Mars Reconnaissance Orbiter approach and Delta DOR

New Horizons early operations

SOHO keyhole event beginning in week 08, DOY 055

STEREO Ahead launch week 06, DOY 042

STEREO Behind launch week 06, DOY 042

Voyager 1 MAGROL in week 05, DOY 034

Wilkinson Microwave Anisotropy Probe maneuver in week 07

Events, Recommendations and Analyses

2006 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

☺ EVN move one of two supports from week 08 to week 07 and change each support from 16 hours to two 8-hour supports. (1)

GBRA RA500 SOC-M4 change 24-hour support in week 07 to three 8-hour supports and move 2 supports to week 06. (1)

☺ M01O change all 70M standalone passes to MSPA with MGS. (1)

☺ MGS change 3 standalone passes per week at 70M,34BWG2 to MSPA 3 passes with M01O on the 70M. Move the remaining 70M,34BWG2 passes, 1 in week 05, 3 in week 07, and 2 in week 08 to the 34BWG2 only. Move the 4-hour passes in weeks 05 and 06 from the 34BWG1 to the 34BWG2. (1, 2)

☺ MSGR move support from DSS-26,54 to DSS-26,55. (2)

☺ NHPC move 3 early operations passes in weeks 05 - 07 from the 34BWG1 to the 34HEF. (2)

☺ ULYS move all supports from the 34BWG1 to DSS-43 and reduce pass duration from 10 hours to 6 hours. (2)

Events, Recommendations and Analyses

2006 – February (Weeks 05 - 08) (continued)

ANALYSES

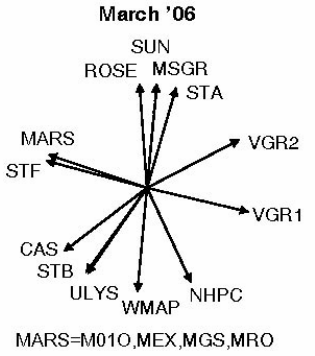
1. (70M) The projected unsupportable time on the 70M subnet is moderate for DSS routine and bearing maintenance, M01O mapping, MGS mapping, MEX orbital science and occultation, VGR1 MAGROL, VGR2, and GBRA Host Country due to view period overlap with daylight maintenance and the Mars project's view period.

2. (34BWG1) The projected unsupportable time is moderate for NHPC early operations, SOHO keyhole event, ULYS, and VGR2, and severe for WIND due to view period overlap with DSS maintenance, NHPC early operations continuous coverage, and SOHO keyhole event.

Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Events, Recommendations and Analyses

2006 – March (Weeks 09 - 13)



EVENTS

Cassini tour

GSSR Asteroid 2000 PN9 in week 10

Mars Express orbital science and bi-static radar

Mars Reconnaissance Orbiter Delta DOR and TCM-4 in week 09, DOY 059, TCM-5 and MOI in week 10, DOY 068 and 069, approach ending in week 11, DOY 073, and aerobraking continuous support beginning in week 11, DOY 074

New Horizons early operations ending in week 10, DOY 071

SOHO keyhole event ending in week 11, DOY 077 and HSO continuous beginning in week 12

Voyager 2 DTR array P/B in week 10, DOY 068, ASCAL and MAGROL in week 11, DOY 072 and 075

Events, Recommendations and Analyses

2006 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

☺ DSN reduce 70M antenna calibrations from 8 hours to 4.5 hours.

GBRA move week 09 DSS-14\63 VLBA support to week 12. Reduce M-Wave Spectroscopy, New Proposals, and Planetary Radio Astronomy from 9 hours to 4.5 hours.

☺ M01O change 3 standalone passes per week at 70M in weeks 09 - 12 to MSPA with MEX at DSS-14,63 and change 3 standalone 70M passes to MSPA with MGS in week 13.

☺ MEX reduce 3 of 7 orbital science passes at DSS-14,63 from 10. 8 hours to 10 hours and MSPA with M01O and reduce the remaining 4 passes from 10.8 hours to 8 hours in weeks 09 - 12.

☺ MGS move 5 passes from the 70M,34B1 to DSS-45,34B2 in week 12 and change 3 standalone passes at 70M,34B1 in week 13 to MSPA with M01O on the 70M.

SOHO reduce 70M keyhole supports from 12 – 13 passes to 8 passes in weeks 09 and 10.

Additional support for the SOHO keyhole period will be added on a best effort basis at the 70M/26M, 34BWG1 and/or 34HEF/26M subnets during the Mid-Range Scheduling Process.

Events, Recommendations and Analyses

2006 – March (Weeks 09 - 13) (continued)

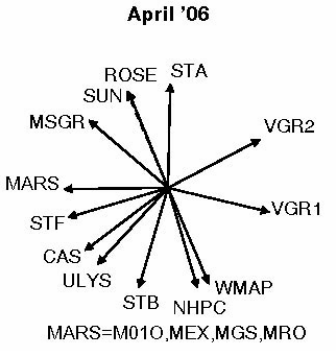
ANALYSES

(70M) The projected unsupportable time on the 70M is moderate to severe for DSS routine and bearing maintenance, M01O mapping MSPA with MGS, MEX orbital science and occultation, MRO MOI in week 11, SOHO keyhole supports, and VGR2 ASCAL in week 11 due to view period overlap with daytime maintenance and Mars projects.

Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Events, Recommendations and Analyses

2006 – April (Weeks 14 - 17)



EVENTS

Cassini tour

Mars Express orbital science and bi-static radar

Mars Reconnaissance Orbiter aerobraking continuous support

MESSENGER TCM-11 in week 14

SOHO HSO continuous

Voyager 1 DTR array P/B in week 17, DOY 117

WIND TCM in week 14, DOY 095

Events, Recommendations and Analyses

2006 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

☺ DSN reduce 70M antenna calibrations from 8 hours to 4.5 hours.

GBRA reduce M-Wave Spectroscopy, New Proposals, and Planetary Radio Astronomy from 6 hours to 4.5 hours. Reduce all DSS-63 Host Country supports from 8 hours to 6 hours, and reduce VLBA support from 10 hours to 8 hours and move from week 15 to week 14.

☺ GSSR GODR reduce weeks 15 and 16 supports from 8 hours to 4 hours and move week 16 support to week 14.

☺ MEX reduce 3 of 7 DSS-14,63 orbital science and occultation passes from 10.8 hours to 6 hours.

☺ VGR2 reduce 3 of 6 – 7 passes at DSS-45,45,34 from 8 hours to 6 hours.

Events, Recommendations and Analyses

2006 – April (Weeks 14 - 17) (continued)

ANALYSES

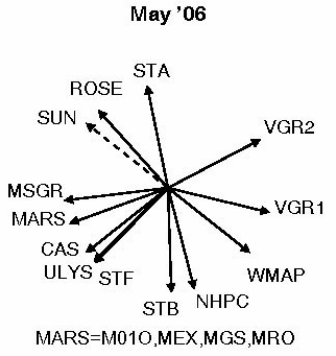
(70M) The projected unsupportable time on the 70M is moderate for DSS routine and bearing maintenance, GBRA Host Country and VLBA SOC-M4, GSSR GODR and Mercury supports, and MEX orbital science and occultation in weeks 15 – 17 due to view period overlap with daylight maintenance and Mars projects.

Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – May (Weeks 18 - 21)



EVENTS

DSS-63 approved downtime (antenna controller replacement) beginning in week 21

Cassini tour

Goldstone Solar System Radar Mercury radar support in week 18

GBRA RA500 SOC-M4 24-hour quarterly epoch at DSS-14 in week 21

Mars Express orbital science ending in week 18 and bi-static radar

Mars Reconnaissance Orbiter aerobraking continuous support

SOHO HSO continuous ending in week 20 and keyhole event beginning in week 21, DOY 148

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 1 ASCAL and MAGROL in week 18, DOY 122 and 125

Events, Recommendations and Analyses

2006 – May (Weeks 18 - 21) (continued)

RECOMMENDATIONS

GSSR move Mercury support from week 18 to week 19.

☺ **M01O change 3 standalone 70M passes in weeks 18, 20, and 21 to MSPA with MEX in week 18 at DSS-14,63, and MSPA in weeks 20 and 21 with MGS at the 70M.**

☺ **MEX change 3 standalone orbital science DSS-14,63 passes to MSPA with M01O in week 18.**

☺ **MGS change 3 standalone DSS-14,43,65 passes in week 20 and 3 passes in week 21 from the 34BWG1 to MSPA with M01O at the 70M.**

☺ **ULYS reduce pass duration from 10 hours to 6 hours and move support from DSS-43 to DSS-43,34 in week 18.**

☺ **VGR2 reduce 2 passes in week 18 from 8 hours to 6 hours and move from DSS-43,45,34 to DSS-45,34. In week 21, move 3 passes from DSS-43,45,34 to DSS-43,34 and reduce pass duration from 8 hours to 6 hours.**

Events, Recommendations and Analyses

2006 – May (Weeks 18 - 21) (continued)

ANALYSES

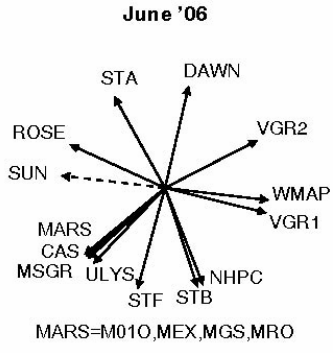
(70M) The projected unsupportable time is moderate to severe for DSS routine maintenance due to view period overlap of daytime maintenance with GSSR Mercury, MEX orbital science and occultation, M01O and MGS mapping, ULYS, VGR1 MAGROL and compounded by the approved downtime for DSS-63 antenna controller replacement beginning in week 21.

Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26)



EVENTS

DSS-63 approved downtime (antenna controller replacement)

Cassini tour

Dawn launch and initial acquisition in week 24, DOY 168

Mars Express bi-static radar

Mars Reconnaissance Orbiter aerobraking continuous support

New Horizons flyby rehearsal beginning in week 24

SOHO keyhole event ending in week 24, DOY 184

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 2 MAGROL in week 24, DOY 167

Wilkinson Microwave Anisotropy Probe maneuver in week 23

Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26) (continued)

RECOMMENDATIONS

☺ DSN reduce 70M and 34BWG1 antenna calibrations from 8 hours to 4.5 hours.

☺ CHDR move 7 of 21 passes per week from the 34BWG1 to the 26M subnet in weeks 22 – 25 and increase pass duration from 1 hour to 2 hours. (3)

GBRA reduce M-Wave Spectroscopy, New Proposals, and Planetary Radio Astronomy from 6 hours to 4.5 hours. (1)

☺ MGS reduce pass duration for 2 to 3 standalone passes per week from 10 hours to 8 hours and use split passes of 4 hours each on the 34BWG1 and at DSS-45,34B2. (1, 2, 3)

☺ NHPC move 2 cruise passes in week 24 from the 34BWG1 to DSS-26,55. (3)

☺ VGR2 reduce 3 to 4 passes in weeks 22 – 25 from 8 hours to 6 hours. (1, 2, 3)

Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26) (continued)

ANALYSES

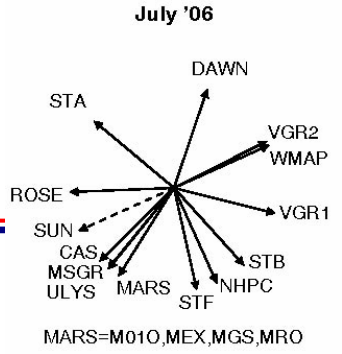
1. (70M) The projected unsupportable time is moderate to extreme for DSS routine maintenance, moderate for GBRA VLBA, MEX, M01O and MGS mapping, and ULYS due to view period overlap with daytime maintenance and Mars projects and the approved downtime for DSS-63 antenna controller replacement
2. (34HEF) The projected unsupportable time is moderate for DSS maintenance and VGR2. The contention is predominantly at DSS-45 and is due to view period overlap with Dawn launch phase support and MRO aerobraking.
3. (34BWG1) The projected unsupportable time is moderate to severe for DSS maintenance, SOHO keyhole and TSO events, ULYS, and WIND due to view period overlap.

Contention levels on the 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – July (Weeks 27 - 30)



EVENTS

DSS-63 approved downtime (antenna controller replacement)

Cassini tour

Dawn launch support ending in week 27

Hayabusa (MUSES-C) TCM-4 support in weeks 28 – 30

Mars Express bi-static radar

Mars Reconnaissance Orbiter aerobraking continuous support

New Horizons flyby rehearsal ending in week 28

STEREO Ahead prime science support

STEREO Behind prime science support

Wind TCM in week 27, DOY 186

Events, Recommendations and Analyses

2006 – July (Weeks 27 - 30) (continued)

RECOMMENDATIONS

GBRA delete all New Proposal support and VLBA SOC-M4 support in week 23, change DSS-43 Host Country support in week 29 from three 8-hour to four 6-hour supports, and move 2 of the 4 supports to week 30. (1)

☺ M01O reduce one MSPA pass per week with MGS in weeks 28 – 30 from 12 hours to 8 hours and move support from DSS-14 to DSS-43. Maximize MSPA capability in weeks 28 – 30, MSPA 2 passes per week with MGS on the 34BWG1 subnet to meet tracking support requirements. (1)

☺ MGS MSPA 2 passes per week on the 34BWG1 subnet with M01O in weeks 28 – 30.☺ RFC reduce CAT M&E supports from 24 hours to 18 hours. (2)

☺ ULYS reduce pass duration on all supports from 10 hours to 6 hours and move from DSS-43 to DSS-34. (1)

Events, Recommendations and Analyses

2006 – July (Weeks 27 - 30) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for DSS bearing and routine maintenance, GBRA VLBA and Host Country, M01O mapping, MEX bi-static radar, MGS mapping, and ULYS due to view period overlap with the daylight maintenance, the Mars project's view period, and the approved downtime for DSS-63 ACR.

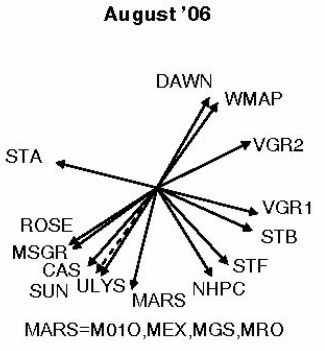
2. (34HEF) The projected unsupportable time is moderate for DSS maintenance due to the 24-hour requirements for RFC CAT M&E supports and view period overlap with the Mars projects.

Contention levels on the 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35)



EVENTS

DSS-63 approved downtime (antenna controller replacement) ending in week 35

Cassini tour

Mars Express bi-static radar

Mars Reconnaissance Orbiter aerobraking continuous support

New Horizons flyby rehearsal

SOHO keyhole event beginning in week 34, DOY 236

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 1 MAGROL in week 31, DOY 217

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)

RECOMMENDATIONS

☺ ATOT delete Imagery support at DSS-43 in week 35. (1)

☺ CHDR move 7 of 21 passes per week from the 34BWG1 to the 26M subnet in weeks 22 – 25 and increase pass duration from 1 hour to 2 hours. (2)

GBRA delete M-Wave Spectroscopy in week 31, New Proposal support in weeks 31 and 33, planet Radio Astronomy in week 33, and VLBA support in week 33. (1)

GSSR Mercury Radar reduce support in weeks 33 and 35 from 5.2 hours to 3 hours and move week 35 support to week 34. (1)

☺ M01O Maximize MSPA capability MSPA 2 standalone passes per week with MGS at DSS-43, one pass per week with MGS at DSS-14,43, and add an additional 1 to 2 passes per week on the 34BWG2 subnet and MSPA with MGS to meet tracking support requirements. (1)

☺ MGS change 2 standalone 10-hour passes per week at DSS-43,26,55 to DSS-43, reduce to 8 hours and MSPA with M01O. Move 1 pass per week from the 34BWG1 to DSS-14,43 in week in weeks 31 – 33, one pass per week from DSS-43,26,55 to DSS-14,43 and MSPA with M01O. Move the remaining 1 to 2 standalone passes from the 34BWG1 and from DSS-43,26,55 to the 34BWG2 and MSPA with M01O. (1, 2)

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)

RECOMMENDATIONS

SOHO reduce keyhole support at the 70M in week 35 from 14 passes to 9 passes. (1)

Additional support for the SOHO keyhole period will be added on a best effort basis at the 70M/26M, 34BWG1 and/or 34HEF/26M subnets during the Mid-Range Scheduling Process.

☺ VGR1 delete two 6-hour passes at DSS-24,54,15,65 in weeks 32 - 35 and four 6-hour passes at DSS-15,65,54 in weeks 34 and 35. (2)

☺ VGR2 reduce 3 of 7 passes per week in weeks 32 – 35 from 8 hours to 6 hours. (1, 2)

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for DSS routine and bearing maintenance, moderate for GBRA VLBA SOC-M4, M01O mapping, MEX bi-static radar, MGS mapping, SOHO keyhole event, VGR1 MAGROL, and VGR2 routine support due to view period overlap with the daylight maintenance, Mars projects, and approved DSS-63 downtime for ACR.

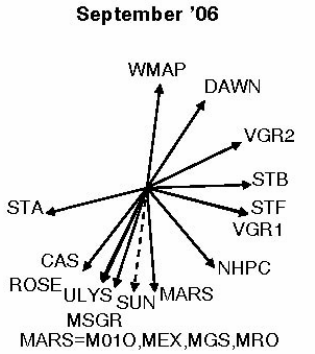
2. (34BWG1) The projected unsupportable time is moderate for DSS maintenance, SOHO keyhole event, ULYS, and WIND due to oversubscription in the Sun view period.

Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39)



EVENTS

DSS-24 approved downtime (X/X-Ka band) beginning in week 36

Cassini tour

GSSR Asteroid 2001 CB21 beginning in week 36

Mars Express bi-static radar

Mars Reconnaissance Orbiter aerobraking continuous support ending in week 37, DOY 256 and transition to prime science in week 37, DOY 257

MESSENGER Delta DOR and TCM-12 support beginning in week 38

New Horizons flyby rehearsal and Delta DOR support in weeks 38 and 39

Rosetta Mars swingby support beginning in week 36, DOY 250

SOHO keyhole event ending in week 37, DOY 258

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 2 DTR P/B in week 36, DOY 249, ASCAL and MAGROL in week 37, DOY 255 and 258

Wilkinson Microwave Anisotropy Probe TCM in week 39, DOY 274

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

☺ M01O MSPA two standalone passes per week with MGS at DSS-43. (1)

☺ MGS change 2 standalone 70M passes per week to MSPA with M01O at DSS-43 and move remaining 1 - 2 passes per week from the 70M to the 34HEF. (1)

☺ MSGR move TCM support from DSS-26, 34, 54 to the 34HEF. (2)

☺ ROSE move Mars swingby passes from DSS-15,26,54 to DSS-15,65. (2)

SOHO reduce 34BWG1 keyhole support from 10 to 5 passes in week 37. (2)

Additional support for the SOHO keyhole period will be added on a best effort basis at the 70M/26M, 34BWG1 and/or 34HEF/26M subnets during the Mid-Range Scheduling Process.

☺ ULYS reduce three to four 10-hour split passes at DSS-34,54 and DSS-45,65 to three to four 6-hour passes at DSS-34,45. (2)

☺ VGR2 change 2 of 6 passes in weeks 36 and 37 and 2 of 7 passes in weeks 38 and 39 at DSS-34, 45 from 8 hours to 6 hours. (1, 2)

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for DSS maintenance, GBRA Host Country and VLBA, M01O mapping, MGS mapping, SOHO keyhole event and maneuver, and VGR1, and severe for MEX R/S solar corona. The unsupportable time is due to over subscription in the daylight maintenance and Mars projects view periods. The Mars missions are in contention with each other and their 10-hour requirement impacts the GBRA, SOHO keyhole event, ULYS, and VGR2 support.

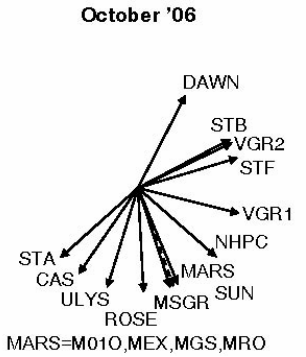
2. (34BWG1) The projected unsupportable time is moderate for MSGR, NHPC, VGR2, and WIND in weeks 37 and 38 and severe for SOHO, ULYS and WIND in week 37. The 34 meter subnet is oversubscribed in the southern hemisphere due to MSGR TCM, NHPC flyby rehearsal and SOHO keyhole events and is further impacted by the approved downtime for DSS-24.

Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43)



EVENTS

DSS-24 approved downtime (X/X-Ka band) ending in week 42

DSS-45 proposed downtime (antenna controller replacement) beginning in week 41

Cassini tour

GSSR Asteroid 2001 CB21 ending in week 40

Mars Express bi-static radar and solar corona R/S

Mars Reconnaissance Orbiter aerobraking ending in week 40, DOY 279, transitioning to prime science and solar conjunction beginning in week 40, DOY 280

MESSENGER Venus flyby 3 support beginning in week 40, TCM-13 support in week 41, Delta DOR support ending in week 41 and solar conjunction beginning in week 43

New Horizons flyby rehearsal ending in week 40

Rosetta DSM2 in week 42, DOY 294 and Delta DOR at DSS-14\43 in weeks 41 and 42 and Mars swingby support

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43)

EVENTS (Continued)

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 1 DTR array P/B in week 43, DOY 298 and 299

Wind TCM in week 40, DOY 276

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

☺ DSS-45 approve downtime (antenna controller replacement) beginning in week 41

☺ DSS reduce all DSS-15 maintenance from 8 hours to 6 hours, and reduce DSS-24 maintenance from 8-hours to 6-hours in week 43. (2, 3)

☺ DAWN change allocated requirement from the 34HEF to DSS-15,65 in weeks 41 - 43. (2)

GBRA delete Host country at DSS-63 in weeks 40 and 41 and M-wave Spectroscopy in weeks 40 - 42. (1)

☺ GSSR move 2 Asteroid CB21 supports from week 40 to week 39. (1)

☺ M01O reduce DSS-43 MSPA passes with MGS from 10 hours to 8 hours. Maximize MSPA capability, MSPA 6 - 7 passes per week with MGS on the 34HEF and at DSS-26,55 to meet tracking support requirements. (1)

☺ MGS reduce DSS-43 MSPA passes with M01O from 10 hours to 8 hours. Move the 3 - 4 standalone passes at DSS-25,34,65 to DSS-26,55 and MSPA with M01O at DSS-26,55 and on the 34HEF subnet. (2, 3)

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

☺ MSGR change Delta DOR support from DSS-15\45 to DSS-15\34 and move Venus flyby-3 passes from the 34HEF to DSS-15,34,65 in weeks 41 and 42. (1)

☺ NHPC move two passes in week 43 from DSS-24,34 to DSS-15,65. (2)

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43) (continued)

ANALYSES

1. (70M) The projected unsupportable time for DSS maintenance is moderate to extreme and moderate for M01O mapping, MEX solar corona, and MGS mapping and beta supplement due to over subscription in the maintenance and Mars projects view period.

2. (34HEF) The projected unsupportable time for DSS maintenance is moderate to severe due to MGS mapping and beta supplement, MRO solar conjunction, MSGR Delta DOR and Venus flyby 3, Rose Mars swingby, and VGR2 view period overlap with the daylight maintenance view period and the proposed DSS-45 downtime that begins in week 41.

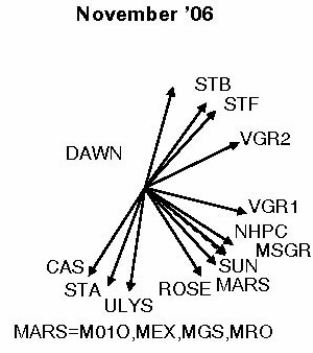
3. (34BWG1) The projected unsupportable time is moderate to severe for DSS maintenance, MGS mapping and beta supplement, MRO solar conjunction, MSGR Venus flyby 3, NHPC, ROSE, and VGR2 and severe to extreme for ULYS and WIND in weeks 41 and 42. Contention is due to complete overlap of project view periods, DSS-24 approved downtime that ends in week 42, and the proposed DSS-45 downtime that begins in week 41.

Contention levels on the 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2006 – November (Weeks 44 - 48)



EVENTS

DSS-45 approved downtime (antenna controller replacement)

Cassini tour

EVN E500 J-M4 24 quarterly epoch at DSS-14\63 in week 44

GBRA RA500 SOC-M4 24-hour quarterly epoch at DSS-14\63 in week 45

Mars Express bi-static radar and solar corona R/S

Mars Reconnaissance Orbiter solar conjunction ending in week 45, DOY 310, prime science beginning in week 45

MESSENGER solar conjunction ending in week 47, DOY 325, TCM-14 in week 48 and Venus flyby 3

Rosetta Mars swingby support

SOHO keyhole event beginning in week 47, DOY 329

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 1 ASCAL and MAGROL in week 44, DOY 304 and 307

Events, Recommendations and Analyses

2006 – November (Weeks 44 - 48) (continued)

RECOMMENDATIONS

☺ DSS reduce one DSS-14 routine maintenance support per week from 8 hours to 6 hours. (1)

GBRA delete Host Country supports at DSS-63, delete all support for New Proposals, and move the DSS-14\63 VLBA array from week 44 to week 48. (1)

GSSR reduce Mercury supports from 5.2 hours to 4 hours. (1)

☺ M01O maximize MSPA capability, MSPA 1 DSS-43 mapping pass with MGS in week 44. (2)

☺ MGS move 2 DSS-15,25,65 mapping and beta supplement passes in week 44 to DSS-43 and MSPA with M01O, move 2 - 3 passes per week from the 34BWG1 to DSS-15,26,55. (2)

SOHO reduce six 34BWG1 keyhole supports in week 47 from 6 to 4 and in week 48, reduce 70M keyhole supports from 14 to 8. (1, 2)

Additional support for the SOHO keyhole period will be added on a best effort basis at the 70M/26M, 34BWG1 and/or 34HEF/26M subnets during the Mid-Range Scheduling Process.

☺ ULYS reduce the pass duration for 7 passes per week from 10 hours to 6 hours. Delete one 10-hour pass in week 47. (1, 2)

Events, Recommendations and Analyses

2006 – November (Weeks 44 - 48) (continued)

ANALYSES

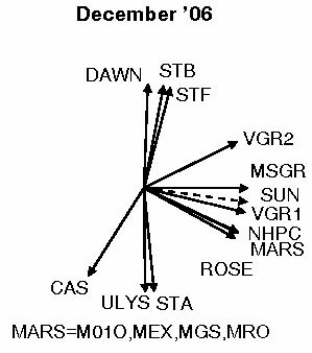
1. (70M) The projected unsupportable time for DSS maintenance is moderate to extreme and moderate for MEX R/S and solar corona, ULYS, and VGR2 due to view period overlap with the daylight maintenance and the Mars view periods.

2. (34BWG1) The projected unsupportable time is moderate to extreme for DSS maintenance, MGS mapping and beta supplement, MSGR, SOHO Keyhole event, ULYS, and WIND due to view period overlap with the daylight maintenance and the Mars view periods.

Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52)



EVENTS

DSS-45 approved downtime (antenna controller replacement) ending in week 49

Cassini tour

Mars Express bi-static radar

Mars Reconnaissance prime science and cruise Ka-band operations demo

MESSENGER TCM-15 in week 49 and Venus flyby 3

Rosetta Mars swingby support

SOHO keyhole event ending in week 49, DOY 344

STEREO Ahead prime science support

STEREO Behind prime science support

Voyager 2 MAGROL in week 50, DOY 349

Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52) (continued)

RECOMMENDATIONS

☺ DSS reduce DSS-15, 24, and 26 maintenance in week 49 from 8 hours to 6 hours. (2)

☺ M01O MSPA 3 standalone passes at the 70M with MGS. (1)

☺ MGS change 3 passes per week allocated at 70M,26,55 to MSPA with M01O on the 70M and move the remaining passes to DSS-15,26,65 in weeks 49, 51 and 52. (1)

☺ ULYS reduce 7 DSS-45,34 passes per week from 10 hours to 6 hours and delete the 10-hour ranging pass in week 51. (1, 2)

☺ VGR2 reduce 7 DSS-43 passes from 8 hours to 6 hours in week 49. (1, 2)

Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52) (continued)

ANALYSES

1. (70M) The projected unsupportable time for DSS maintenance is moderate to severe and moderate for M01O mapping, MEX bi-static radar, MGS mapping and beta supplement, SOHO keyhole event, ULYS, and VGR2 due to view period overlap with the daylight maintenance and the Mars view period.

2. (34BWG1) The projected unsupportable time is moderate to severe for DSS maintenance, MGS mapping and beta supplement, MSGR TCM and SOHO keyhole event in week 49, ULYS, VGR2, and WIND due to complete view period overlap with the daylight maintenance and the Mars view period.

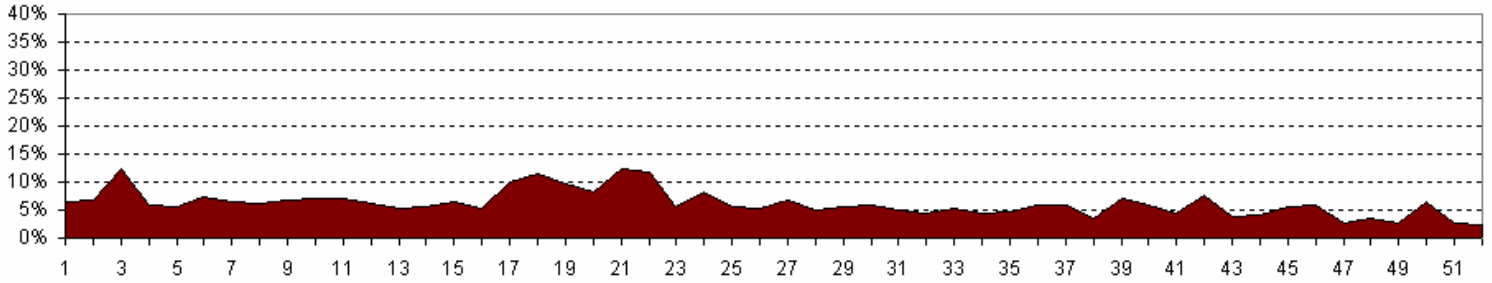
Contention levels on the 34HEF, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

2007 Events, Analysis and Recommendations

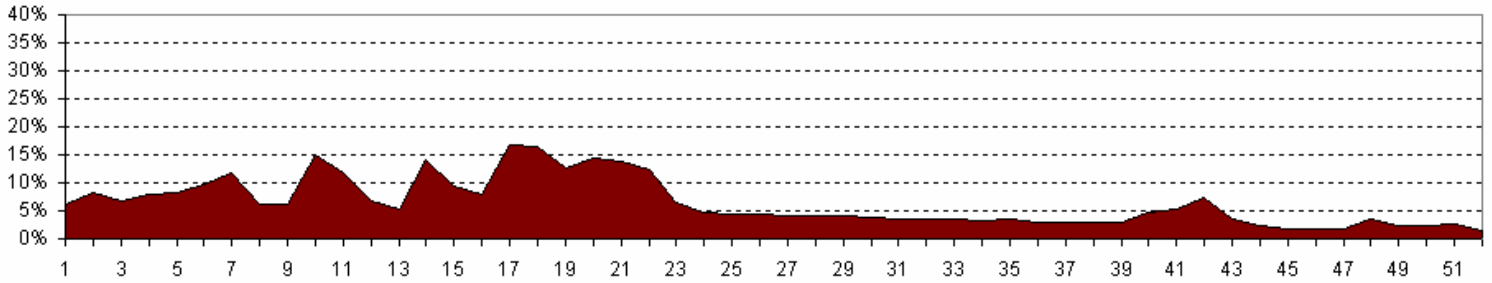
Events, Recommendations and Analyses

2007 Weekly Average User Unsupportable Time

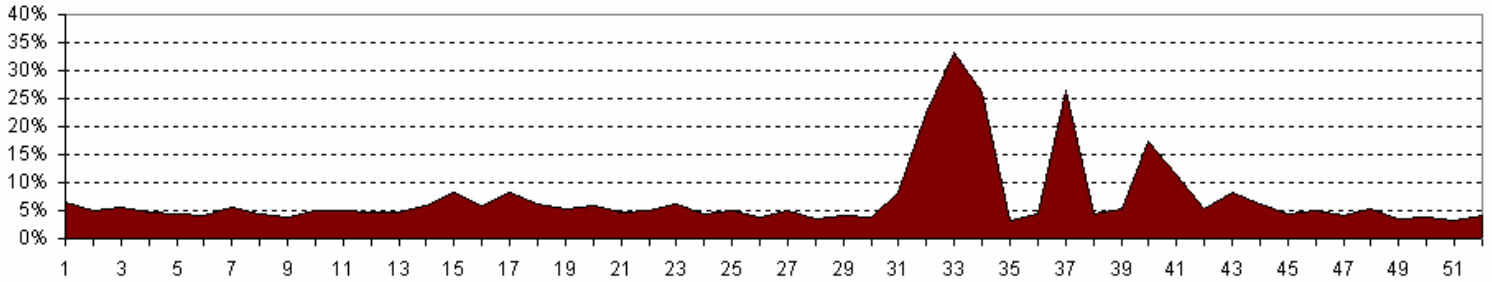
70M



34HEF



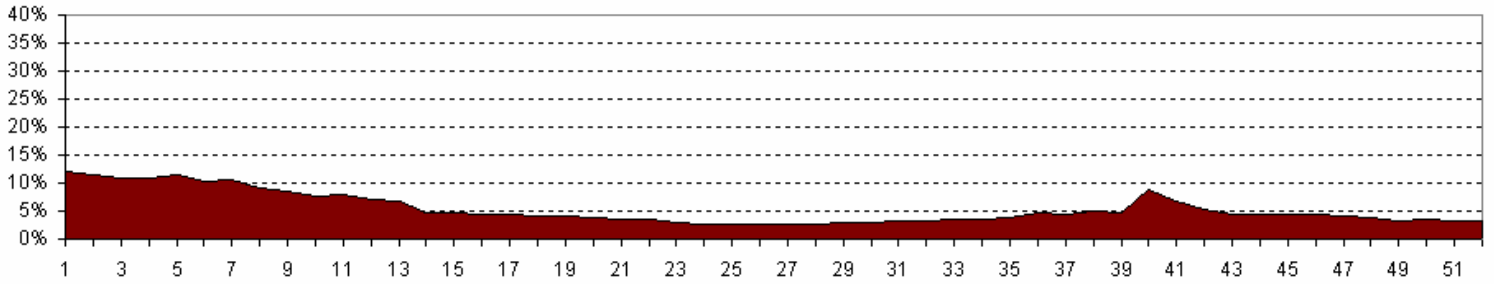
34BWG1



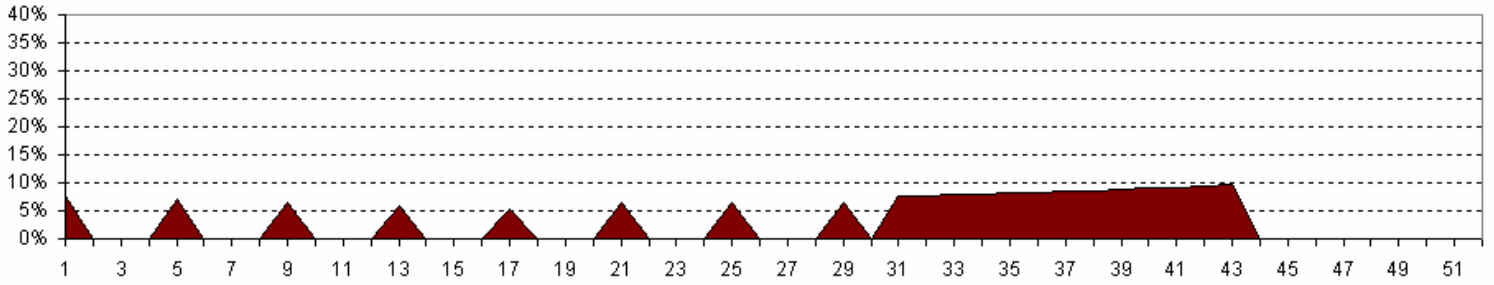
Events, Recommendations and Analyses

2007 Weekly Average User Unsupportable Time

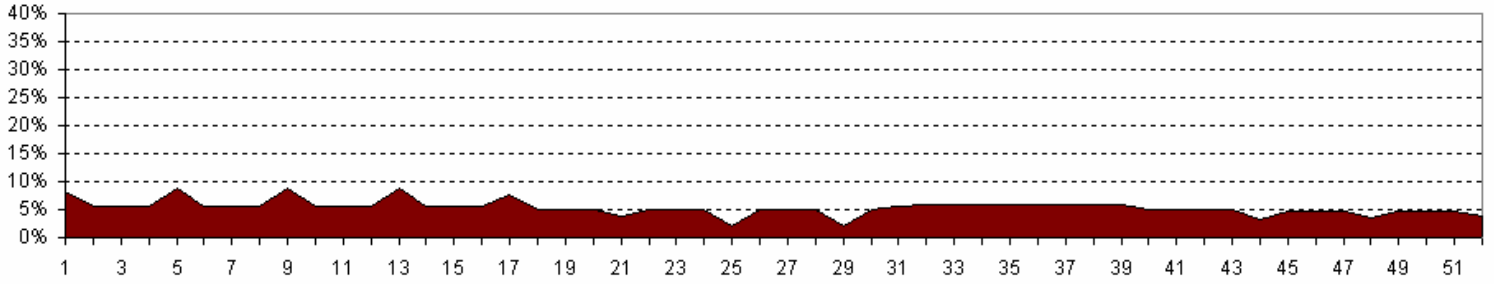
34BWG2



34HSB



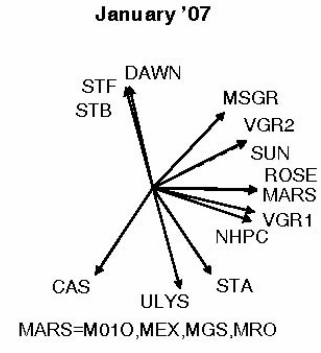
26M



Resource Allocation Review Board

Events, Recommendations and Analyses

2007 – January (Weeks 01 - 04)



EVENTS

Cassini tour

GSSR 1991 VK Asteroid observations in weeks 02 and 03

Mars Reconnaissance Orbiter prime science

New Horizons Jupiter approach begins in week 02

Rosetta Mars swingby support

STEREO Ahead prime science

STEREO Behind prime science

Wilkinson Microwave Anisotropy Probe TCM in week 03

Wind TCM in week 01, DOY 005

Events, Recommendations and Analyses

2007 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

☺ DSS move the DSS-14 bearing maintenance from week 03 to week 04 and reduce DSS-14 to 1 routine support in week 03. (1)

GBRA reduce the DSS-45 Host Country in week 02 from 12 hours to 8 hours. (2)

☺ GSSR reduce the asteroid observations from 4 to 3 tracks and delete the GODR support in week 03. (1)

☺ M01O MSPA 2 - 3 passes per week with MGS on the 70M. In week 03 also reduce two 70M passes from 10 hours to 6 hours. M01O maximize MSPA capability, MSPA 7 passes with MGS at DSS-25,26,55 in week 03 to meet tracking support requirements.. (1, 2)

☺ MGS change 2 - 3 standalone passes per week at the 34HEF to MSPA with M01O on the 70M. MGS maximize MSPA capability, MSPA 7 passes with M01O at DSS-25,26,55 in week 03 to meet M01O tracking support requirements. (2)

☺ ROSE change allocated resources from DSS-15,34,54 to DSS-26,34,54. (2)

☺ SOHO reduce the TSO 5-day continuous support to 3 days in week 01. (4)

☺ ULYS reduce 7 DSS-34 passes from 10 hours to 6 hours. (3)

Events, Recommendations and Analyses

2007 – January (Weeks 01 - 04) (continued)

ANALYSES

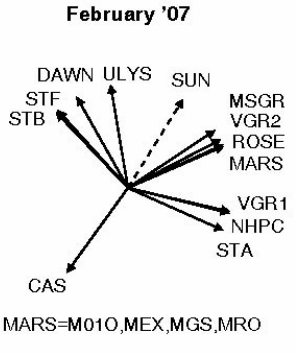
1. (70M) Extreme unsupportable time is forecast for DSS Maintenance in week 03. Contention is due to the GSSR 1991 VK Asteroid observation request at DSS-14 and requirements supporting M01O mapping, MEX bi-static radar, MRO prime science, NHPC Jupiter approach and STF on the subnet. The GSSR, Mars, and NHPC view periods overlap the periods required for maintenance by more than 70%.
2. (34HEF) Moderate to severe unsupportable time is forecast for DSS Maintenance, MGS, SGP and VGR2. Contention is due to Dawn, MGS, MRO prime science, ROSE Mars swingby, and STF >50% view period overlap with the periods required for maintenance and the 12- to 24-hour GBRA and SGP requests.
3. (34BWG1) Moderate unsupportable time is forecast for WIND. Contention is primarily at DSS-34 while ULYS is in view only from the Canberra Complex.
4. (26M) Moderate unsupportable time is forecast for ACE and SOHO due to the SOHO 5-day continuous request in week 01. Offloading 26M user support to the 34BWG1 would increase existing load and contention on the subnet.

Contention levels on the 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2007 – February (Weeks 05 - 08)



EVENTS

Cassini tour

European VLBI Network E500 J-M4 quarterly event in week 08

Ground Based Radio Astronomy RA500 SOC-M4 quarterly event in week 07

Hayabusa (MUSES-C) re-entry phase begins in week 08

Mars Reconnaissance Orbiter prime science

New Horizons Jupiter approach

Rosetta Mars swingby in week 09, DOY 058 and Mars swingby support

STEREO Ahead prime science

STEREO Behind prime science

Events, Recommendations and Analyses

2007 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

GBRA reduce the DSS-45 Host Country in week 07 from 12 hours to 8 hours. (1)

☺ M01O MSPA 2 - 3 passes per week with MGS on the 70M in weeks 05 - 07. (1)

☺ MGS change 2 - 3 passes per week allocated on the 34HEF to MSPA with M01O on the 70M. (1)

☺ MRO change allocated resources on two 34HEF passes to DSS-24,54 in weeks 05 - 07. (1)

☺ ROSE change allocated resources from DSS-15,34,54 to DSS-26,34,54. (1)

☺ SOHO reduce the TSO 5-day continuous support to 3 days in week 05. (3)

☺ ULYS reduce 7 DSS-34 passes from 10 hours to 6 hours. (2)

Events, Recommendations and Analyses

2007 – February (Weeks 05 - 08) (continued)

ANALYSES

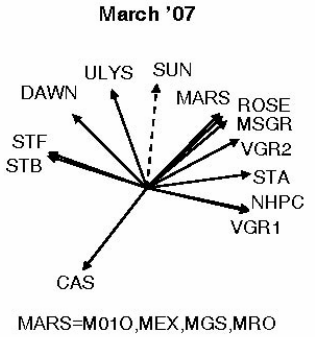
1. (34HEF) Severe unsupportable time is forecast for DSS Maintenance, GBRA, MGS, and VGR2 in weeks 05 - 07. Contention is due to requests supporting MGS mapping and beta supplement, MRO prime science, and ROSE Mars swingby and >50% view period overlap with the periods required for maintenance.
2. (34BWG1) Moderate unsupportable time is forecast for WIND. Contention is primarily at DSS-34 while ULYS is in view only from the Canberra Complex.
3. (26M) Moderate unsupportable time is forecast for ACE in week 05 due to the SOHO 5-day continuous request. Offloading 26M user support to the 34BWG1 would increase existing load and contention on that subnet.

Contention levels on the 70M, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13)



EVENTS

Cassini tour

Hayabusa (MUSES-C) re-entry phase

Mars Reconnaissance Orbiter prime science

New Horizons Jupiter approach, flyby week 09, DOY 057, checkout, and departure

Rosetta Mars swingby support ends in week 13, DOY 085

STEREO Ahead prime science

STEREO Behind prime science

Voyager 2 DTR P/B week 10, DOY 066, ASCAL in week 11, DOY 071, and MAGROL in week 11, DOY 074

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

GBRA move the DSS-14\63 VLBA SOC-M4 support from week 10 to week 09 and delete the week 10 DSS-45 Host Country. (1, 2)

☺ M01O MSPA 2 - 3 passes per week with MGS on the 70M. In weeks 10 and 11 also reduce 2 passes from 10 hours to 6 hours. M01O maximize MSPA capability, MSPA 7 passes with MGS at DSS-25,26,55 in weeks 10 and 11 to meet tracking support requirements. (1)

☺ MGS change 2 - 3 passes per week allocated on the 34HEF to MSPA with M01O on the 70M. MGS maximize MSPA capability, MSPA 7 passes with M01O at DSS-25,26,55 in weeks 10 and 11 to meet M01O tracking support requirements. (2)

☺ MRO change allocated resources from 70M to DSS-14,63 in week 11. (1)

☺ RFC move the week 11 CAT M&E to week 13. (2)

☺ ROSE change allocated resources from DSS-15,34,54 to DSS-26,34,54 in weeks 09 - 12. (2)

☺ SOHO reduce the TSO 5-day continuous support to 3 days in weeks 09 and 13. (4)

☺ ULYS reduce 7 DSS-34 passes per week from 10 hours to 6 hours. (3)

☺ VGR2 reduce 7 DSS-45 passes in weeks 10 and 11 and 3 - 4 DSS-45 passes in week 09 and 12 from 8 hours to 5 hours. (2)

Events, Recommendations and Analyses

2007 – March (Weeks 09 - 13) (continued)

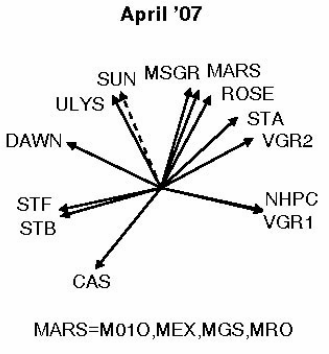
ANALYSES

1. (70M) Moderate unsupportable time is forecast for M01O and MEX in weeks 10 and 11. Contention is due to requirements supporting DSS Maintenance, M01O, MEX, MRO, NHPC Jupiter Flyby, GBRA VLBA array support and VGR2 MAGROL.
2. (34HEF) Moderate to severe unsupportable time is forecast for DSS Maintenance, GSSR, MGS and VGR2. Contention is due to requirements supporting DSS Maintenance, Dawn, MGS, MRO, MSGR, ROSE, VGR2, and GBRA 12- to 24-hour ground based observations.
3. (34BWG1) Moderate unsupportable time is forecast for WIND. Contention is primarily at DSS-34 while ULYS is in view only from the Canberra Complex.
4. (26M) Moderate unsupportable time is forecast for ACE and SOHO due to the SOHO 5-day continuous requests in weeks 09 and 13. Offloading 26M user support to the 34BWG1 would increase load and contention on that subnet.

Contention levels on the 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – April (Weeks 14 - 17)



EVENTS

Cassini tour

Goldstone Solar System Radar Mercury observation in week 14

Hayabusa (MUSES-C) re-entry phase

Mars Express occultation begin in week 17

Mars Reconnaissance Orbiter prime science

New Horizons Jupiter departure ends in week 16

STEREO Ahead prime science

STEREO Behind prime science

Voyager 1 DTR array in week 17, DOY 116

Events, Recommendations and Analyses

2007 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

GBRA reduce the DSS-45 Host Country from 12 hours to 6 hours in week 14. (2)

☺ M01O change 2 - 3 of seven 70M passes to MSPA with MGS in weeks 14 - 16 and MSPA 3 passes with MEX and 3 passes with MGS in week 17. (1, 2)

☺ MEX MSPA 3 passes with M01O at the 70M in week 17. (1, 2)

☺ MGS MSPA two to three 34HEF passes per week with M01O at the 70M. (1, 2)

☺ RFC move the CAT M&E support in week 17 to DSS-25\55 and use for X/Ka-band catalog development. (2)

☺ SOHO reduce the TSO 5-day continuous request to 3 days in week 17. (4)

☺ ULYS reduce seven 34BWG1 passes per week from 10 hours to 6 hours. (3)

☺ VGR2 reduce 7 DSS-45 passes per week from 8 hours to 5 hours. (2)

Events, Recommendations and Analyses

2007 – April (Weeks 14 - 17) (continued)

ANALYSES

1. (70M) Severe unsupportable time is forecast for MEX occultation support in week 17. Contention is due to the MEX request for 11 hours of daily support split between a 70M and 34HEF combination of SPC-10 and SPC-60 antennas. The full view period from both complexes is needed to total 11 hours of view. DSS Maintenance, M01O mapping and MRO prime science also require support on the 70M.

2. (34HEF) Moderate to severe unsupportable time is forecast for MEX occultation support in week 17 and for DSS Maintenance, GBRA, MGS and VGR2 in all weeks. Contention is due to the MEX occultation request in week 17 and requests supporting MRO prime science, MGS beta supplement, and 34HEF user's view period overlap with the Mars and maintenance view periods.

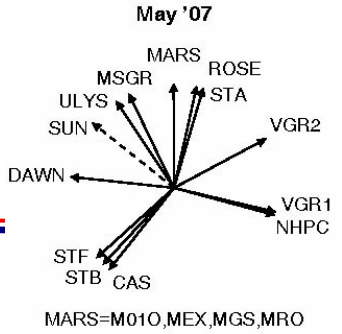
3. (34BWG1) Moderate unsupportable time is forecast for ULYS and WIND. Contention is primarily at DSS-34 while ULYS is in view only from the Canberra Complex. MRO Ka-band operations, MSGR, Hayabusa re-entry, STA and STB prime science also require support on the 34BWG1 subnet. View periods for these missions overlap all but 5 - 6 hours of Ulysses view at Canberra.

4. (26M) Moderate unsupportable time is forecast for ACE in week 17. Contention is due to ACE and SOHO view period overlap with the periods required for preventative maintenance and the SOHO 5-day continuous request.

Contention levels on the 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – May (Weeks 18 - 22)



EVENTS

Cassini tour

European VLBI Network E500 J-M4 quarterly event in week 22

Ground Based Radio Astronomy RA500 SOC-M4 quarterly event in week 21

Hayabusa (MUSES-C) re-entry phase

Mars Express occultation support ends in week 22

Mars Reconnaissance Orbiter prime science

STEREO Ahead prime science

STEREO Behind prime science

Wilkinson Microwave Anisotropy Probe TCM in week 19

Events, Recommendations and Analyses

2007 – May (Weeks 18 - 22) (continued)

RECOMMENDATIONS

☺ EVN move the 16-hour E-500 J-M4 support from week 22 to week 23. (1)

GBRA move the 24-hour RA500 SOC-M4 support from week 21 to week 24 and reduce the DSS-45 Host Country from 12 hours to 6 hours in week 20. (1, 2)

☺ M01O change six of seven 70M passes to MSPA 2 - 3 passes with MGS and 3 passes with MEX in weeks 19, 20 and 22 and in weeks 18 and 21, MSPA 3 passes with MGS and 3 passes with MEX. (1, 2)

☺ MEX MSPA 3 passes per week with M01O at the 70M. (1, 2)

☺ MGS MSPA 2 - 3 passes per week with M01O at the 70M in weeks 19, 20 and 22 and 3 passes in weeks 18 and 21. (2)

☺ RFC change the allocated resources from DSS-15\45,15\65 to DSS-25\34,25\55 in week 18. (2)

☺ SOHO reduce the TSO 5-day continuous request to 3 days in week 21. (3)

☺ VGR2 reduce 7 DSS-43,45 passes per week from 8 hours to 6 hours. (1, 2)

Events, Recommendations and Analyses

2007 – May (Weeks 18 - 22) (continued)

ANALYSES

1. (70M) Severe unsupportable time is forecast for MEX occultation support. Contention is due to the MEX request for 11 hours of daily support split between a 70M and 34HEF combination of SPC-10 and SPC-60 antennas. The full view period from both complexes is needed to total 11 hours of view. M01O mapping and MRO prime science also require support on the 70M. The Mars requests are also in contention with DSS Maintenance and with EVN and GBRA 16- to 24-hour arrayed requests.

2. (34HEF) Extreme unsupportable time is forecast for MEX occultation support and moderate to severe for DSS Maintenance and MGS. Contention is due to the MEX occultation request for 11 hours of daily support split between a 34HEF and 70M combination of SPC-10 and SPC-60 antennas. The full view period from both complexes is needed to total 11 hours of view. MRO prime science and MGS beta supplement also request support on the 34HEF. The Mars requests are also in contention with DSS Maintenance, and the RFC 24-hour requests.

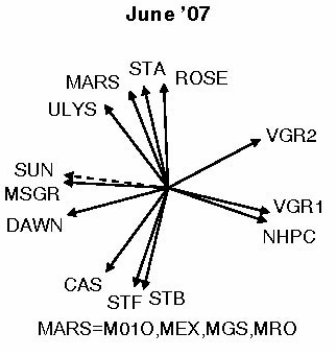
3. (26M) Moderate unsupportable time is forecast for ACE in week 21. Contention is due to ACE and SOHO view period overlap with the periods required for antenna maintenance and the SOHO 5-day continuous TSO support.

Contention levels on the 34BWG1, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review Board

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26)



EVENTS

DSS-54 proposed downtime (X/X Ka-band installation) beginning in week 23

Cassini tour

Goldstone Solar System Radar Mercury observation in week 24

Hayabusa (MUSES-C) re-entry and EOM in week 23

Mars Reconnaissance Orbiter prime science

MESSENGER TCM in week 23, DOY 157

STEREO Ahead prime science

STEREO Behind prime science

Voyager 2 MAGROL in week 24, DOY 166

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26) (continued)

RECOMMENDATIONS

☺ DSS-54 approve downtime for X/X Ka-band installation beginning in week 23.

☺ CAS change the resources allocated on 4 to 7 tour passes from DSS-15,24,25,26,54,55,65 to DSS-15,24,25,26,55,65. (2)

☺ CHDR change resources allocated on 21 routine passes from 34BWG1 to 14 passes at DSS-24,34 and seven 2-hour passes on the 26M. (2)

GBRA reduce the DSS-45 Host Country from 12 hours to 8 hours in week 25. (1, 2)

☺ MUSC (Hayabusa) change the resources allocated on re-entry support in week 23 from DSS-25,34,54 to DSS-25,34,65. (2)

☺ IMAG change the resources allocated on 1 SCI load and 13 routine passes per week from 34BWG1 to DSS-24,34.

☺ M01O MSPA four 70M passes per week with MGS. (2)

☺ MGS reduce four 14-hour mapping and beta supplement passes per week allocated at 34BWG1 to 10 hours and MSPA the 4 passes with M01O on the 70M. Change the resources allocated on the remaining 2 - 3 passes from 34BWG1 to DSS-24,34,55. (2)

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26) (continued)

RECOMMENDATIONS (continued)

☺ MSGR change the resources allocated on routine and TCM support from DSS-26,34,54 to DSS-26,34,55. (2)

☺ NHPC change the resources allocated for beacon support from 34BWG1 to DSS-24,34. (2)

☺ RFC move the CAT M&E pair in weeks 23 and 24 to weeks 25 and 26. (1, 2)

☺ STB change the resources allocated for prime science support from DSS-26,34,54 to DSS-26,34,65. (2)

☺ WIND change the resources allocated on 7 routine passes per week from 34BWG1 to DSS-24,34. (2)

Events, Recommendations and Analyses

2007 – June (Weeks 23 - 26) (continued)

ANALYSES

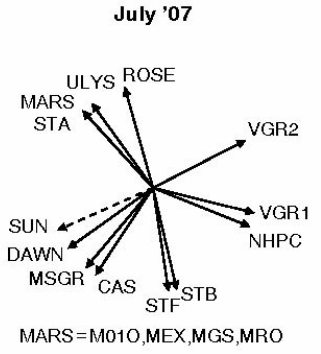
1. (34HEF) Moderate unsupportable time is forecast in for GBRA Host Country in week 24, and ULYS in week 23. Contention is due the MRO request for 14 passes per week and the CAT M&E and Host Country 12- to 24-hour requests for support.

2. (34BWG1) Requirements supporting CAS, CHDR, DSN, Hayabusa, IMAG, MSGR, MGS, NHPC, STB and WIND are in contention with the proposed DSS-54 downtime.

Contention levels on the 70M, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30)



EVENTS

DSS-54 proposed downtime (X/X Ka-band installation) ending in week 30

Cassini tour

Mars Reconnaissance Orbiter prime science

STEREO Ahead prime science

STEREO Behind prime science

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30) (continued)

RECOMMENDATIONS

☺ DSS-54 approve downtime for X/X Ka-band installation

☺ CAS change the resources allocated on 4 to 7 tour passes per week from DSS-15,24,25,26,54,55,65 to DSS-15,24,25,26,55,65.

☺ CHDR change the resources allocated on 21 routine passes per week from 34BWG1 to 14 passes at DSS-24,34 and seven 2-hour passes on the 26M.

☺ IMAG change resources allocated on 1 SCI load 13 routine and passes per week from 34BWG1 to DSS-24,34

☺ M01O MSPA four 70M passes per week with MGS.

☺ MGS reduce four 14-hour mapping and beta supplement passes per week allocated at 34BWG1 to 10 hours and MSPA the 4 passes with M01O on the 70M. Change the resources allocated on the remaining 2-3 passes allocated at 34BWG1 to DSS-24,34,55.

☺ MSGR change the resources allocated on routine support from DSS-26,34,54 to DSS-26,34,55.

☺ NHPC change the resources allocated for beacon support from 34BWG1 to DSS-24,34.

☺ STB change the resources allocated for prime science support from DSS-26,34,54 to DSS-26,34,65.

☺ WIND change the resources allocated on 7 routine passes from 34BWG1 to DSS-24,34.

Events, Recommendations and Analyses

2007 – July (Weeks 27 - 30) (continued)

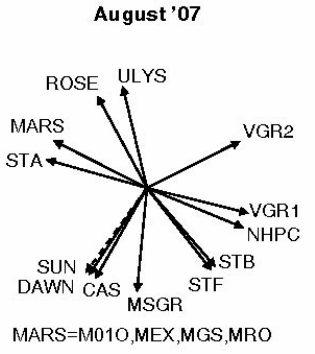
ANALYSES

(34BWG1) Requirements supporting CAS, CHDR, IMAG, MSGR, MGS, NHPC, STB and WIND are in contention with the proposed DSS-54 downtime.

Contention levels on the 70M, 34HEF, 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35)



EVENTS

Cassini tour

Goldstone Solar System Radar Mercury observations in week 31

Mars Reconnaissance Orbiter prime science

Phoenix Scout launch in week 32, DOY 221, and TCM-1 in week 34

SOHO continuous HSO support beginning week 31

STEREO Ahead prime science

STEREO Behind prime science

Wilkinson Microwave Anisotropy Probe TCM in week 35

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35) (continued)

RECOMMENDATIONS

☺ DSS reduce DSS-27, DSS-16 and DSS-66 maintenance to 6 hours per support. (2, 3)

☺ M01O MSPA 6 - 7 passes per week on the 70M with MGS in weeks 32 - 34. (1)

☺ MSGR change the allocated resources in week 32 - 34 from DSS-26,34,54 to DSS-26,55. (1)

☺ MGS change 4 standalone 14-hour 34BWG1 passes per week to 10 hours in weeks 32 - 34. MSPA six to seven 10-hour passes per week with M01O on the 70M in weeks 32 - 34. (1)

☺ PHX move 3 passes per week from the 34BWG1 to the 34HEF in weeks 33 and 34. (1)

☺ STA change the allocated resources on 7 prime science passes from DSS-26,34,55 to 6 passes at DSS-26,55 and 1 pass at DSS-43 in weeks 32 - 34. (1)

☺ ULYS reduce 7 - 8 passes per week from 10 hours to 8 hours and change the allocated resources from 34BWG1 to 70M,34H (assumes 4 hours of U/L on 70M and 4 hours of D/L on the 34HEF) in weeks 32 - 34. (1)

Events, Recommendations and Analyses

2007 – August (Weeks 31 - 35) (continued)

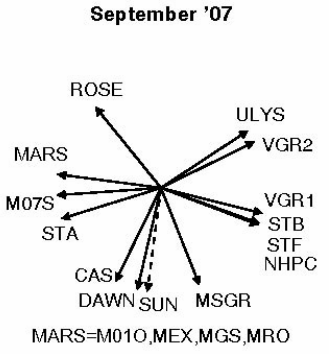
ANALYSES

1. (34BWG1) Moderate to extreme unsupportable time is forecast in weeks 32 - 34 for CAS, DSS Maintenance, MGS, MRO, MSGR, STA, ULYS, VGR2, and WIND. Contention is primarily at DSS-34 and DSS-54 due to the PHX continuous request for launch and TCM support, MRO Ka-band operations demo, and MGS mapping and beta supplement. Contention is also identified at DSS-34 between ULYS and VGR2.
2. (34HSB) Moderate unsupportable time is forecast for DSS Maintenance due to SOHO continuous HSO support.
3. (26M) Moderate unsupportable time is forecast for DSS Maintenance due to SOHO continuous HSO support.

Contention levels on the 70M, 34HEF, and 34BWG2 subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39)



EVENTS

Cassini tour

Goldstone Solar System Radar Mercury observations in week 39

Mars Reconnaissance Orbiter prime science

MESSENGER TCM in week 38

New Horizons checkout begins in week 38

Phoenix Scout ACS NAV in week 37

SOHO continuous HSO support

STEREO Ahead prime science

STEREO Behind prime science

Voyager 1 MAGROL in week 37, DOY 253

Voyager 2 DTR P/B in week 36, DOY 248, ASCAL in week 37, DOY 254, and MAGROL in week 37, DOY 257

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

☺ DSS reduce DSS-27, 16 and 66 preventative maintenance in each week to 6 hours and move DSS-14 bearing maintenance from week 39 to week 40. (1, 3, 4)

☺ M01O MSPA 6 passes on the 70M with MGS. (2)

☺ MSGR change the allocated resources in week 37 from DSS-26,34,54 to DSS-25,65. (2)

☺ MGS delete six 10-14 hour 34BWG1 passes and MSPA six 10-hour passes with M01O on the 70M in week 37. (2)

☺ PHX move 3 passes from the 34BWG1 to the 34HEF in week 37. (2)

☺ STA change the allocated resources on 7 passes in week 37 from DSS-26,34,55 to 6 passes at DSS-26,55 and 1 pass at DSS-43. (2)

☺ ULYS reduce 8 passes from 10 hours to 8 hours and change the allocated resources from 34BWG1 to 70M,34H (assumes 4 hours of U/L on 70M and 4 hours of D/L on the 34HEF) in week 37. (2)

Events, Recommendations and Analyses

2007 – September (Weeks 36 - 39) (continued)

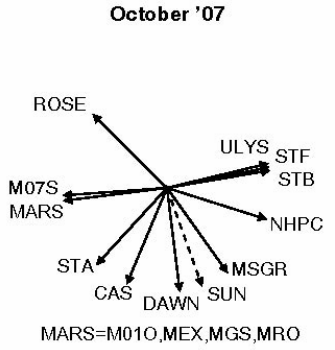
ANALYSES

1. (70M) Moderate unsupportable time is forecast for 3 GSSR Mercury observations in week 39. Contention is at DSS-14 with requirements supporting CAS tour, DSS-14 preventative and bearing maintenance and M01O.
2. (34BWG1) Moderate to extreme unsupportable time is forecast in week 37 for DSN, DSS Maintenance, IMAG, MGS, MSGR, PHX, STA, ULYS, VGR2, and WIND. Contention is primarily at DSS-34 and DSS-54 due to the PHX continuous request for ACS/NAV support, MRO Ka-band operations demo, and MGS mapping and beta supplement. Contention is also identified at DSS-34 between ULYS and VGR2.
3. (34HSB) Moderate unsupportable time is forecast for DSS Maintenance due to SOHO continuous HSO support.
4. (26M) Moderate unsupportable time is forecast for DSS Maintenance due to SOHO continuous HSO support.

Contention levels on the 34HEF and 34BWG2 subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – October (Weeks 40 - 43)



EVENTS

Cassini tour

Goldstone Solar System Radar Mercury observation in week 41 and Asteroid 2340 Hathor observation in week 43

Kepler launch in week 40, DOY 274, and commission support

Mars Reconnaissance Orbiter prime science

MESSENGER Mercury flyby 1 and TCM support

New Horizons checkout

Phoenix Scout TCM-2 in week 40

SOHO continuous HSO support

STEREO Ahead prime science

STEREO Behind prime science

Wilkinson Microwave Anisotropy Probe EOEM in week 40, DOY 274

Events, Recommendations and Analyses

2007 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

☺ M01O MSPA 6 passes on the 70M with MGS in week 40. (1)

☺ MGS delete six 10 - 14 hour 34BWG1 passes and MSPA six 10-hour passes with M01O on the 70M in week 40. (1)

☺ MSGR change cruise and TCM allocated resources from DSS-26,34,54 to DSS-25,45,65 in weeks 40, 41 and 43. (1, 2)

☺ STB change the allocated resources on 7 prime science passes in weeks 40 and 41 from DSS-26,34,54 to 6 passes at DSS-25,55 and 1 pass at DSS-43. (2)

Events, Recommendations and Analyses

2007 – October (Weeks 40 - 43) (continued)

ANALYSES

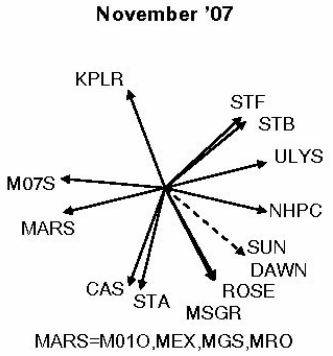
1. (34BWG1) Moderate to extreme unsupportable time is forecast in weeks 40 and 41 for DSS Maintenance, MGS, MSGR, STB, and WIND due to requirements supporting the PHX TCM-2 in week 40 and the Kepler launch in weeks 40 and 41.

2. (34BWG2) Moderate to extreme unsupportable time is forecast for DSS Maintenance, MGS, MSGR, and STB in weeks 40 and 41. Contention is due to requirements supporting the Kepler launch, MGS mapping and beta supplement, and STB prime science.

Contention levels on the 70M, 34HEF, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – November (Weeks 44 - 48)



EVENTS

Cassini tour

European VLBI Network E500 J-M4 in week 46

Goldstone Solar System Radar Mercury observation in week 44

Ground Based Radio Astronomy RA500 SOC-M4 in week 45

Kepler science collection begins in week 44

Mars Reconnaissance Orbiter prime science

New Horizons checkout, ends in week 44, and maneuver in week 46

Rosetta Earth 2 swingby in week 46, DOY 319 and Earth 2 swingby support in weeks 44 - 48, DOY 304 - 333

STEREO Ahead prime science

STEREO Behind prime science

Events, Recommendations and Analyses

2007 – November (Weeks 44 - 48) (continued)

RECOMMENDATIONS

None required

Events, Recommendations and Analyses

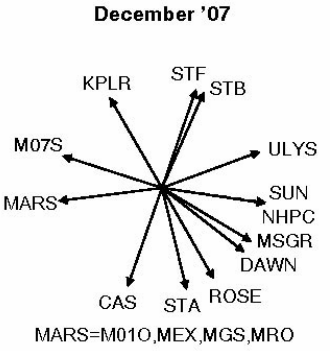
2007 – November (Weeks 44 - 48) (continued)

ANALYSES

Contention levels on the 70M, 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Events, Recommendations and Analyses

2007 – December (Weeks 49 - 52)



EVENTS

Cassini tour

Goldstone Solar System Radar Asteroid 3200 Phaethon observations in weeks 49 and 50 and Mars observations

Kepler science operations, Quarter Roll maneuver in week 49, and TCM in week 50

Mars Reconnaissance Orbiter prime science

MESSENGER DSM-1

STEREO Ahead prime science

STEREO Behind prime science

Voyager 2 MAGROL in week 50, DOY 348

Events, Recommendations and Analyses

2007 – December (Weeks 49 - 52) (continued)

RECOMMENDATIONS

None required

Events, Recommendations and Analyses

2007 – December (Weeks 49 - 52) (continued)

ANALYSES

Contention levels on the 70M, 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

Supplemental Materials

May be found on the RAPSO WWW Homepage at:

http://rapweb.jpl.nasa.gov

- **Ongoing Users Negotiated Requirements**
  - Individual User Loading Profiles
- **Resource Allocation Review Board Information**
  - Supplemental Yearly Information containing
    - Major Events Timeline
    - User Loading Profiles
    - Monthly Subnet Support Projection